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National Eutrophication Survey, Corvallis, Oreg

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16. ABSTRACT

Annual total phosphorus and total nitrogen loadings to the lake were estimated and subdivided according to either point or non-point source origin. An assessment of the lake's trophic condition and limiting nutrient is also provided. All data collected by the U.S.E.P.A. National Eutrophication Survey during the one year study of the lake and its tributaries are included in the report.

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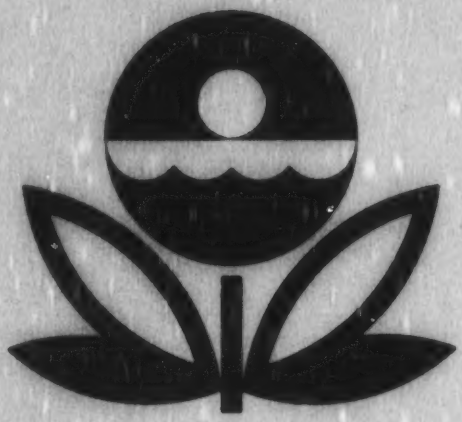

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REPORT

ON

LAKE HARTWELL
ANDERSON, OCONEE, AND PICKENS COUNTIES, SOUTH CAROLINA;
FRANKLIN, HART, AND STEPHENS COUNTIES, GEORGIA

EPA REGION IV

WORKING PAPER No. 432

WITH THE COOPERATION OF THE

SOUTH CAROLINA DEPARTMENT OF HEALTH AND

ENVIRONMENTAL CONTROL

AND THE

SOUTH CAROLINA NATIONAL GUARD

JUNE, 1975

CONTENTS

	Page
Foreword	ii
List of South Carolina Study Lakes	iv
Lake and Drainage Area Map	v
Sections	
I. Conclusions	1
II. Lake and Drainage Basin Characteristics	4
III. Lake Water Quality Summary	6
IV. Nutrient Loadings	12
V. Literature Reviewed	23
VI. Appendices	24

FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs.

OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point-source discharge reduction and non-point source pollution abatement in lake watersheds.

ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's freshwater lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by EPA and to augment plans implementation by the states.

ACKNOWLEDGMENT

The staff of the National Eutrophication Survey (Office of Research & Development, U. S. Environmental Protection Agency) expresses sincere appreciation to the South Carolina Department of Health and Environmental Control for professional involvement, to the South Carolina National Guard for conducting the tributary sampling phase of the Survey, and to those South Carolina wastewater treatment plant operators who voluntarily provided effluent samples and flow data.

The staff of the South Carolina Bureau of Wastewater and Stream Quality Control provided invaluable lake documentation and counsel during the Survey, reviewed the preliminary reports, and provided critiques most useful in the preparation of this Working Paper series.

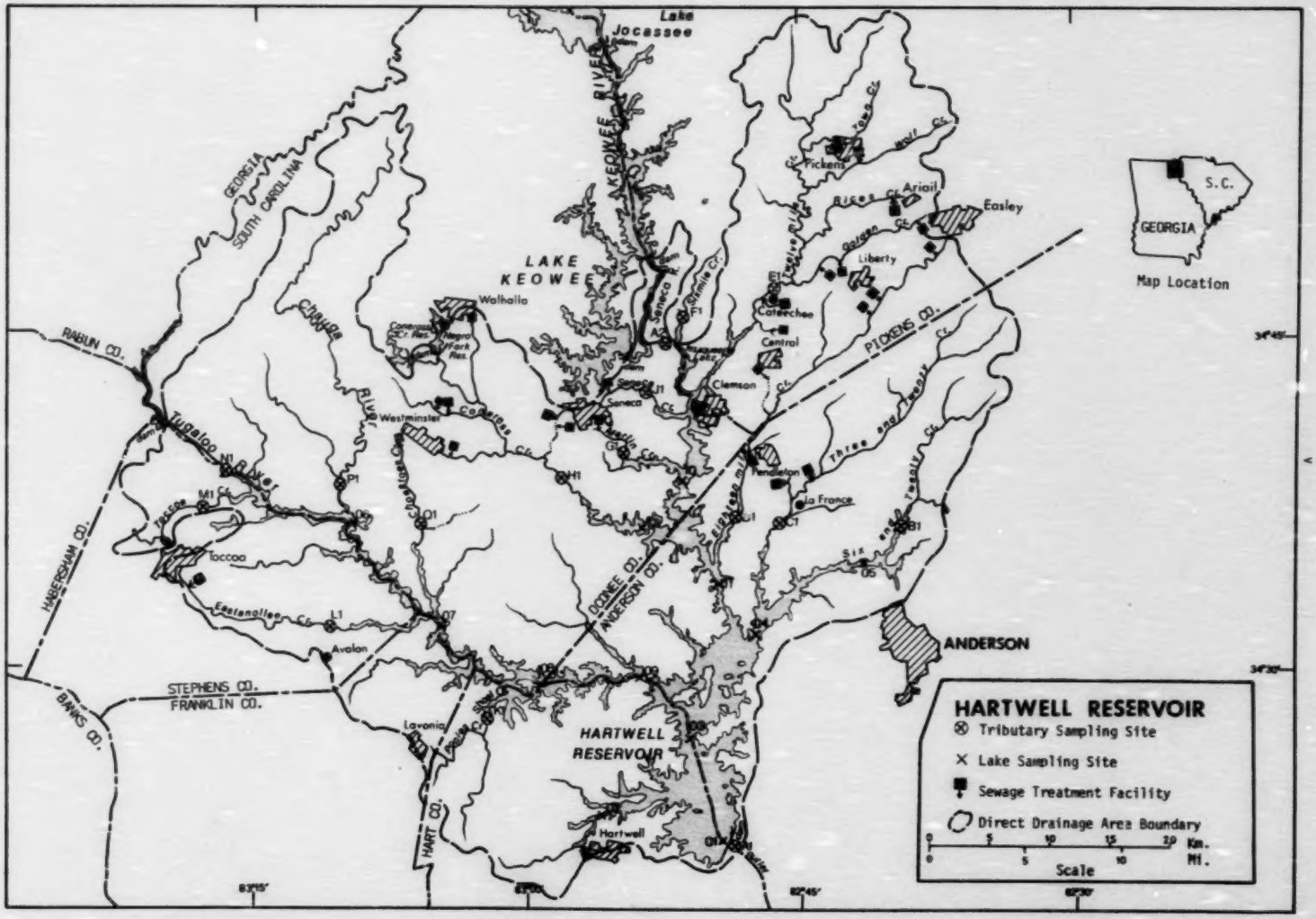
Major General Robert L. McCrady, the Adjutant General of South Carolina, and Project Officer Lt. Colonel John P. DuPre (Retired), who directed the volunteer efforts of the South Carolina National Guardsmen, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF SOUTH CAROLINA

NAME	COUNTY
Clark Hill	Abbeville, McCormick, SC; Columbia, Elbert, Lincoln, McDuffie, Wilks, GA
Fishing Creek	Chester, Lancaster
Greenwood	Greenwood, Laurens, Newberry
Hartwell	Anderson, Oconee, Pickens, SC; Franklin, Hart, Stephens, GA
Keowee	Oconee, Pickens
Marion	Berkeley, Calhoun, Claredon, Orangeburg, Sumter
Moultrie	Berkeley
Murray	Lexington, Newberry, Richland, Saluda
Robinson	Chesterfield, Darlington
Saluda	Greenville, Pickens
Secession	Abbeville, Anderson
Wateree	Fairfield, Kershaw, Lancaster
William C. Bowen	Spartanburg
Wylie	York, SC; Gaston, Mecklenburg, NC


Lake Jocassee
KEOWEE RIVER
GEORGIA
SOUTH CAROLINA
LAKE KEOWEE
Walhalla
Seneca
Clemson
Central
Pickens
Easley
Liberty
Ariail
Tugaloo River
Chauga River
RABUN CO.
HABERSHAM CO.
STEPHENS CO.
FRANKLIN CO.
BANKS CO.
HART CO.
OCONEE CO.
ANDERSON CO.
PICKENS CO.
Toccoa
Eastanollee
Avalon
Lavonia
Hartwell
HARTWELL RESERVOIR
Pendleton
La France
ANDERSON
Map Location
S.C.
GEORGIA
HARTWELL RESERVOIR
Tributary Sampling Site
Lake Sampling Site
Sewage Treatment Facility
Direct Drainage Area Boundary
Scale
Km.
Mi.

LAKE HARTWELL

STORET NO. 4505

I. CONCLUSIONS

A. Trophic Condition:

Collectively, the Survey data indicate Lake Hartwell is mesotrophic, and when the data are examined on a station-by-station basis, mesotrophy is indicated at all but stations 5, 6, 10, and 12 (see map, page v); however, except for marked depression of hypolimnetic dissolved oxygen, station 1 would be considered oligotrophic. Meso-eutrophy is indicated at stations 5, 10, and 12; and station 6 essentially was a river station. Following is a tabulation of the means of four relevant parameters for each of the lake sampling stations:

Station	TP (mg/l)	TN (mg/l)	Secchi disc (meters)	Chlorophyll a (µg/l)
1	0.009	0.387	5.4	3.3
3	0.010	0.482	2.7	2.8
4	0.011	0.382	2.4	3.4
8	0.011	0.445	2.5	4.6
11	0.013	0.436	2.2	6.3
9	0.017	0.452	2.2	4.8
2	0.017	0.402	2.4	8.1
7	0.018	0.423	1.9	5.6
10	0.019	0.417	1.8	7.5
5	0.020	0.455	1.2	7.5
12	0.027	0.464	1.8	10.7

Lake Hartwell ranked second in overall trophic quality when the 13 South Carolina lakes sampled in 1973 were compared using a combination of six parameters*. One of the other lakes had

* See Appendix A.

less median total phosphorus and dissolved orthophosphorus, none of the others had less median inorganic nitrogen, five had less mean chlorophyll a, and only one had greater mean Secchi disc transparency. Marked depression of hypolimnetic dissolved oxygen (<1.0 mg/l) occurred at stations 2, 5, and 10 in June and at stations 1, 3, 4, and 10 in September. Oxygen depletion occurred at stations 8, 9, and 11 in September and at station 3 in November.

Except for turbidity at station 6 in June and September, Survey limnologists did not observe any nuisance conditions during sampling visits.

B. Rate-Limiting Nutrient:

The algal assay results indicate Lake Hartwell was phosphorus limited at the time the samples were collected (06/26/73). The lake data indicate phosphorus limitation in September and November as well.

C. Nutrient Controllability:

1. Point sources--The estimated phosphorus contribution of point sources accounted for 44.6% of the total load reaching Lake Hartwell during the sampling year. Of the 30 municipal wastewater treatment plants known to impact the lake, only five individually contributed more than 2% of the total phosphorus load. One industrial plant contributed an estimated 13.8% of the total load.

The phosphorus loading of 0.83 g/m^2 measured during the sampling year is about 6% greater than that proposed by Vollenweider (Vollenweider and Dillon, 1974) as a eutrophic loading (see page

22). It is calculated that 85% phosphorus removal at the municipal and industrial point sources considered in this report would reduce the loading to 0.51 g/m^2/year, a mesotrophic loading.

If that degree of overall phosphorus removal can be attained, considering the many relatively small contributors, the reduced loading should result in significant improvement in the trophic condition of the upper portions of the embayments (e.g., at stations 10 and 12) as well as provide protection for the existing quality of the main body of the lake.

2. Non-point sources--The phosphorus inputs of the sampled tributaries amounted to 42.8% of the total load during the sampling year. Twelvemile Creek contributed 10.9%; the Tugaloo River, 10.4%; the Seneca River, 9.3%; and the remaining 12 sampled tributaries collectively contributed 12.2%. The ungaged minor tributaries and immediate drainage contributed an estimated 9.4%.

The phosphorus export rates of Toccoa, Twelvemile, and Seneca creeks were much higher than the rates of the other tributaries (see page 21). The higher rate of Toccoa Creek probably resulted from underestimation of the Toccoa plant #1 load and/or urban drainage from Toccoa. The higher rates of the other two streams may have resulted from phosphorus contributions of the unsampled privately-owned domestic facilities and industrial facilities in those drainages (see pages 15 and 16).

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS†

A. Lake Morphometry††:

1. Surface area: 226.43 kilometers^2.
2. Mean depth: 13.9 meters.
3. Maximum depth: 53.4 meters.
4. Volume: 3,146.263 x 10^6 m^3.
5. Mean hydraulic retention time: 304 days.

B. Tributary and Outlet:
(See Appendix C for flow data)

1. Tributaries -

Name	Drainage area (km^2)*	Mean flow (m^3/sec)*
Seneca River	1,178.4	32.440
Six and Twenty Creek	76.4	1.070
Three and Twenty Creek	214.2	2.990
Eighteenmile Creek	142.7	2.130
Twelvemile Creek	354.8	6.030
Sixmile Creek	36.0	0.610
Martin Creek	13.0	0.186
Coneross Creek	190.4	3.190
Seneca Creek	10.3	0.153
Shoal Creek	70.2	0.980
Eastanollee Creek	63.7	1.040
Toccoa Creek	68.4	1.280
Tugaloo River	1,367.5	38.640
Chauga River	233.6	6.030
Choestoea Creek	37.0	0.550
Minor tributaries & immediate drainage -	1,102.8	22.440
Totals	5,159.4	119.759

† Table of metric conversions--Appendix B.
†† At power-pool elevation; Mast, 1974.
* For limits of accuracy see Working Paper No. 175, "...Survey Methods, 1973-1976".

2. Outlet -

Savannah River	5,407.9	119.759*

C. Precipitation**:

1. Year of sampling: 165.5 centimeters.

2. Mean annual: 120.0 centimeters.

* Includes area of lake; outflow adjusted to equal sum of inflows.
** See Working Paper No. 175.

III. LAKE WATER QUALITY SUMMARY

Lake Hartwell was sampled three times during the open-water season of 1973 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from a number of depths at 12 stations on the lake (see map, page v). During each visit, a single depth-integrated (4.6 m or near bottom to surface) sample was composited from the 12 stations for phytoplankton identification and enumeration; and during the first visit, four 18.9-liter depth-integrated samples were composited for algal assays. Also each time, a depth-integrated sample was collected from each of the stations for chlorophyll a analysis. The maximum depths sampled were 51.8 meters at station 1, 18.3 meters at station 2, 46.3 meters at station 3, 30.5 meters at station 4, 9.1 meters at station 5, 9.8 meters at station 6, 14.6 meters at station 7, 18.3 meters at station 8, 35.1 meters at station 9, 18.3 meters at station 10, 18.3 meters at station 11, and 12.2 meters at station 12.

The sampling results are presented in full in Appendix D and are summarized in the following table.

A. SUMMARY OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR LAKE HARTWELL
STORET CODE 4505

PARAMETER	1ST SAMPLING (6/26/73) 12 SITES RANGE	MEAN	MEDIAN	2ND SAMPLING (9/15/73) 12 SITES RANGE	MEAN	MEDIAN	3RD SAMPLING (11/13/73) 12 SITES RANGE	MEAN	MEDIAN
TEMP (C)	11.8 - 30.5	23.9	24.7	13.7 - 29.3	25.3	27.0	13.2 - 18.3	17.0	17.2
DISS OXY (MG/L)	0.2 - 10.4	5.5	5.9	0.0 - 7.2	3.8	3.9	0.0 - 10.0	7.0	7.4
CNDCTVY (MCROMO)	50. - 260.	55.	50.	23. - 120.	50.	39.	19. - 83.	35.	33.
PH (STAND UNITS)	5.8 - 8.6	6.8	6.5	5.6 - 7.4	6.1	6.0	6.2 - 6.7	6.5	6.5
TOT ALK (MG/L)	10. - 29.	14.	14.	10. - 21.	12.	12.	10. - 23.	14.	15.
TOT P (MG/L)	0.006 - 0.110	0.015	0.012	0.005 - 0.130	0.016	0.011	0.007 - 0.046	0.017	0.013
ORTHO P (MG/L)	0.002 - 0.009	0.003	0.002	0.002 - 0.017	0.005	0.004	0.002 - 0.020	0.004	0.003
NO2+NO3 (MG/L)	0.040 - 0.440	0.126	0.085	0.020 - 0.270	0.054	0.030	0.020 - 0.100	0.053	0.050
AMMONIA (MG/L)	0.040 - 0.800	0.098	0.070	0.020 - 0.510	0.088	0.050	0.020 - 0.960	0.109	0.080
KJEL N (MG/L)	0.200 - 0.900	0.289	0.200	0.200 - 0.900	0.368	0.300	0.200 - 1.400	0.409	0.400
INORG N (MG/L)	0.090 - 0.870	0.223	0.170	0.050 - 0.540	0.141	0.090	0.060 - 0.980	0.161	0.150
TOTAL N (MG/L)	0.240 - 0.950	0.414	0.360	0.220 - 0.970	0.422	0.410	0.240 - 1.420	0.462	0.450
CHLRPYL A (UG/L)	2.8 - 17.5	8.1	7.6	2.9 - 6.8	5.2	5.3	0.7 - 8.9	3.6	2.8
SECCHI (METERS)	1.5 - 10.1	3.2	2.4	0.6 - 4.0	2.0	1.9	0.9 - 2.1	1.8	1.8

8. Biological Characteristics:

1. Phytoplankton -

Sampling Date	Dominant Genera	Algal Units per ml
06/26/73	1. Tabellaria sp.	507
	2. Melosira sp.	244
	3. Flagellates	150
	4. Cyclotella sp.	94
	5. Oscillatoria sp.	38
	Other genera	234
	Total	1,267
09/15/73	1. Lyngbya sp.	1,045
	2. Staurastrum sp.	101
	3. Flagellates	101
	4. Anabaenopsis sp.	90
	5. Synedra sp.	67
	Other genera	350
	Total	1,754
11/13/73	1. Melosira sp.	349
	2. Tabellaria sp.	129
	3. Cyclotella sp.	90
	4. Scenedesmus sp.	38
	5. Flagellates	26
	Other genera	169
	Total	801

2. Chlorophyll a -

Sampling Date	Station Number	Chlorophyll a (µg/l)
06/26/73	1	4.7
	2	15.0
	3	3.3
	4	5.5
	5	9.0
	6	2.8
	7	7.7
	8	5.3
	9	8.2
	10	7.5
	11	10.4
	12	17.5
09/15/73	1	4.2
	2	6.8
	3	4.5
	4	3.9
	5	6.4
	6	2.9
	7	5.2
	8	6.0
	9	4.9
	10	6.1
	11	5.4
	12	6.5
11/13/73	1	1.1
	2	2.6
	3	0.7
	4	0.9
	5	7.2
	6	3.1
	7	4.0
	8	2.6
	9	1.2
	10	8.9
	11	3.2
	12	8.0

C. Limiting Nutrient Study:

1. Autoclaved, filtered, and nutrient spiked -

a. Stations 1, 2, and 3 -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.005	0.203	0.1
0.010 P	0.015	0.203	1.3
0.020 P	0.025	0.203	4.8
0.050 P	0.055	0.203	5.5
0.025 P + 0.5 N	0.030	0.703	8.5
0.050 P + 1.0 N	0.055	1.203	17.6
1.0 N	0.005	1.203	0.2

b. Stations 4 and 5 -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.008	0.222	0.2
0.010	0.018	0.222	0.2
0.020 P	0.028	0.222	6.1
0.050 P	0.058	0.222	8.5
0.025 P + 0.5 N	0.033	0.722	19.3
0.050 P + 1.0 N	0.058	1.222	19.3
1.0 N	0.008	1.222	0.1

c. Stations 6, 7, 8, and 9 -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.011	0.186	0.1
0.010 P	0.021	0.186	1.5
0.020 P	0.031	0.186	3.6
0.050 P	0.061	0.186	3.7
0.025 P + 0.5 N	0.036	0.686	8.6
0.050 P + 1.0 N	0.061	1.186	19.3
1.0 N	0.011	1.186	0.2

d. Stations 10, 11, and 12 -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.009	0.240	0.5
0.010 P	0.019	0.240	4.2
0.020 P	0.029	0.240	8.3
0.050 P	0.059	0.240	10.0
0.025 P + 0.5 N	0.034	0.740	12.5
0.050 P + 1.0 N	0.059	1.240	22.3
1.0 N	0.009	1.240	0.4

2. Discussion -

The control yields of the assay alga, Selenastrum capricornutum, indicate that the potential primary productivity of Lake Hartwell was low to moderate at the time the samples were collected (06/26/73). The increased yields with increased levels of orthophosphate, and the lack of significant increases in yields with the addition of only nitrogen, indicate phosphorus limitation.

The lake data also indicate phosphorus limitation (i.e., the mean inorganic nitrogen/orthophosphorus ratios were 28/1 or greater at all sampling times and phosphorus limitation would be expected).

IV. NUTRIENT LOADINGS
(See Appendix E for data)

For the determination of nutrient loadings, the South Carolina National Guard collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page v), except for the high runoff month of January when two samples were collected. Sampling was begun in February, 1973, and was completed in February, 1974.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the South Carolina District Office of the U.S. Geological Survey for the tributary sites nearest the lake.

Except for Choestoea Creek, nutrient loads for sampled tributaries were calculated using mean concentrations and mean flows. Nutrient loads shown are those measured minus point-source loads, if any.

The nutrient loads measured in Choestoea Creek at station Q-1 amounted to less than one-third of the estimated Westminster point-source loads, and the background loads for this stream and the loads for the unsampled "minor tributaries and immediate drainage" were estimated using the means of the nutrient loads, in $kg/km^2/year$, at stations A-2, K-1, N-1, and P-1 and multiplying the means by the Choestoea Creek and ZZ areas in km^2.

The operators of the Central #1 and #2; Clemson; Hartwell, GA; Pickens #1 and #2; and Seneca #4 wastewater treatment plants provided monthly effluent samples and corresponding flow data. The operators

of the Easley (3 plants), Liberty (4), Pendleton (2), Seneca (3), Walhalla (2), and Westminster (4) plants provided effluent samples but could not provide flow data. Nutrient loads for these plants and the Cateechee, Clemson University, Toccoa (GA) #1, and Westminster #5 plants, which were not sampled, were estimated at 1.134 kg P and 3.401 kg N/capita/year.

The nutrient loads attributed to the Toccoa, Georgia, #2 plant and the Coats and Clark industrial plant at Toccoa were calculated using limited effluent data (Anonymous, 1975) and flows estimated at 75% of the design flows given by the Georgia Department of Natural Resources (Anonymous, 1972). However, note that the nitrogen loads are inorganic-N only.

A. Waste Sources†:

1. Known municipal -

Name	Pop. Served	Treatment	Mean Flow (m^3/d)	Receiving Water
Cateechee	600	Imhoff	181.7	Twelvemile Creek
Central				
#1	1,800	Imhoff	673.7	Trib/Eighteen-mile Creek
#2	350	Imhoff	151.4	Trib/Twelvemile Creek
Clemson	2,200	act. sludge	1,271.8	Lake Hartwell
Clemson Univ.	6,000	tr. filter	2,271.0	Lake Hartwell
Easley				
#1	1,000	stab. ponds	265.0	Rices Creek
#2	800	stab. ponds	189.2	Golden Creek
#3	2,000	stab. ponds	757.0	Eighteenmile Creek
Hartwell, GA	4,865	tr. filter	802.4	Cooda Branch
Liberty				
#1*	1,100	aer. pond	378.5	Golden Creek
#2*	1,200	aer. pond	378.5	Eighteenmile Creek
#3*	800	aer. pond	151.4	Eighteenmile Creek
#4*	500	aer. pond	124.9	Golden Creek
Pendleton				
#1	2,360	stab. pond	1,097.6	Eighteenmile Creek
#2	240	stab. pond	246.0	Shanklin Creek/ Three & Twenty Creek
Pickens				
#1*	3,000	aer. pond	700.2	Town Creek
#2	3,000	stab. pond	669.9	Wolf Creek
Seneca				
#1*	2,000	stab. pond	984.1	Perkins Creek
#2	1,073	stab. pond	378.5	Perkins Creek
#3	4,875	stab. pond	1,703.2	Martin Creek
#4	667	act. sludge	458.0	Seneca Creek
Toccoa, GA				
#1	230	act. sludge	87.1	Trib/Toccoa Creek
#2	6,600	aer. ponds	5,488.2	Eastanollee Creek
Walhalla				
#1	3,431	act. sludge	473.1	East Fork Creek
#2	950	Imhoff	397.4	Negro Fork Creek

† Anonymous, 1971; Anonymous, 1972; Foley, 1976; Kennedy, 1976.
* Industries contribute 25% or more of waste load.

Name	Pop. Served	Treatment	Mean Flow (m^3/d)	Receiving Water
Westminster #1*	700	aer. pond	3,028.0	Colonels Fork/ Coneross Creek
#2	1,800	Imhoff	1,136.0	Trib/Choestoea Creek
#3	200	stab. pond	151.4	Colonels Fork/ Coneross Creek
#4	200	stab. pond	354.2	Trib/Coneross Creek
#5	200	septic tank	511.0	Trib/Choestoea Creek

In addition to the sources listed above, there are five privately-owned facilities treating domestic wastes in the Georgia portion of the drainage (combined design flow of 480 m^3/day), and there are at least 23 such facilities in the South Carolina portion of the drainage (combined flow of about 3,000 m^3/day). The nutrient impact of these small sources is not known; but, except for the contributions of seven discharging to unsampled tributaries or directly to the lake, the loads are included in those attributed to the sampled tributaries.

An indirect municipal source, the Walhalla Cane Creek plant, discharges to upstream Lake Keowee**. During the sampling year, the plant contributed an estimated 1,475 kg P and 4,905 kg N to that lake. However, because of the more than 20 km of lake embayment between the point of discharge and the Lake Keowee outlet, it is unlikely that this source contributed significant amounts of nutrients to Lake Hartwell.

* Industries contribute 25% or more of waste load.
** Working Paper No. 433.

2. Known industrial -

Name	Type Waste	Treatment	Design Flow (m^3/d)	Receiving Water
Coats & Clark Co., Toccoa, GA	textile	aer. ponds	7,267.2	Eastanollee Creek

In addition, there are at least 20 South Carolina industrial facilities with combined or actual flows in excess of 31,500 m^3/day (flows are not known for eight of the plants). The nutrient significance of these sources is not known.

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

Source	kg P/ yr	% of total
a. Tributaries (non-point load) -		
Seneca River	17,390	9.3
Six & Twenty Creek	1,010	0.5
Three & Twenty Creek	6,690	3.6
Eighteenmile Creek	1,790	1.0
Twelvemile Creek	20,520	10.9
Sixmile Creek	540	0.3
Martin Creek	200	0.1
Coneross Creek	870	0.5
Seneca Creek	520	0.3
Shoal Creek	1,455	0.8
Eastanollee Creek	1,595	0.8
Toccoa Creek	4,465	2.4
Tugaloo River	19,495	10.4
Chauga River	3,235	1.7
Choestoea Creek	595	0.3
b. Minor tributaries & immediate drainage (non-point load) -	17,645	0.4
c. Known municipal STP's -		
Cateechee	680	9.4
Central		
#1	1,545	0.8
#2	420	0.2
Clemson	2,595	1.4
Clemson University	6,005	3.2
Easley		
#1	1,135	0.6
#2	905	0.5
#3	2,270	1.2
Hartwell	4,800	2.6
Liberty		
#1	1,245	0.7
#2	1,360	0.7
#3	905	0.5
#4	565	0.3
Pendleton		
#1	2,675	1.4
#2	270	0.1

Source	kg P/ yr	% of total
Pickens		
#1	1,395	0.7
#2	1,625	0.9
Seneca		
#1	2,270	1.2
#2	1,215	0.6
#3	5,530	2.9
#4	1,545	0.8
Toccoa		
#1	260	0.1
#2	8,260	4.4
Walhalla		
#1	3,890	2.1
#2	1,075	0.6
Westminster		
#1	795	0.4
#2	2,040	1.1
#3	225	0.1
#4	225	0.1
#5	225	0.1
d. Septic tanks* -	1,540	0.8
e. Industrial -		
Coats & Clark	25,860	13.8
Others unknown	?	-
f. Direct precipitation** -	4,350	2.3
Total	187,715	100.0

2. Outputs -

   Lake outlet - Savannah River 33,850

3. Net annual P accumulation - 153,865 kg.

* Estimated 5,000 lakeshore dwellings plus 48 public access areas with facilities; see Working Paper No. 175.
** See Working Paper No. 175.

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

Source	kg N/ yr	% of total
a. Tributaries (non-point load) -		
Seneca River	658,830	22.6
Six & Twenty Creek	31,485	1.1
Three & Twenty Creek	102,155	3.5
Eighteenmile Creek	47,390	1.6
Twelvemile Creek	174,590	6.0
Sixmile Creek	16,390	0.6
Martin Creek	6,890	0.2
Coneross Creek	55,615	1.9
Seneca Creek	3,930	0.1
Shoal Creek	37,300	1.3
Eastanollee Creek	39,140	1.3
Toccoa Creek	36,355	1.2
Tugaloo River	523,975	17.9
Chauga River	135,965	4.7
Choestoea Creek	19,010	0.7
b. Minor tributaries & immediate drainage (non-point load) -	566,565	19.4
c. Known municipal STP's -		
Cateechee	2,040	<0.1
Central		
#1	3,195	0.1
#2	875	<0.1
Clemson	4,670	0.1
Clemson University	20,405	0.7
Easley		
#1	3,400	0.1
#2	2,720	0.1
#3	6,800	0.2
Hartwell	4,805	0.2
Liberty		
#1	3,740	0.1
#2	4,080	0.1
#3	2,720	0.1
#4	1,700	<0.1
Pendleton		
#1	8,025	0.3
#2	815	<0.1

Source	kg N/ yr	% of total
Pickens		
#1	2,790	0.1
#2	3,125	0.1
Seneca		
#1	6,800	0.2
#2	3,650	0.1
#3	16,580	0.6
#4	1,520	<0.1
Toccoa		
#1	780	<0.1
#2	9,885**	0.3
Walhalla		
#1	11,670	0.4
#2	3,230	0.1
Westminster		
#1	2,380	0.1
#2	6,120	0.2
#3	680	<0.1
#4	680	<0.1
#5	680	<0.1
d. Septic tanks* -	54,450	1.9
e. Industrial -		
Coats & Clark	1,255**	<0.1
Others unknown	?	-
f. Direct precipitation*** -	268,260	9.2
Total	2,920,110	100.0
2. Outputs -		
Lake outlet - Savannah River	3,787,435	
3. Net annual N loss - 867,325 kg.		

* Estimated 5,000 lakeshore dwellings plus 48 public access areas with facilities; see Working Paper No. 175.
** Inorganic-N only.
*** See Working Paper No. 175.

D. Mean Annual Non-point Nutrient Export by Subdrainage Area:

Tributary	kg P/km²/yr	kg N/km²/yr
Seneca River	15	559
Six and Twenty Creek	13	412
Three and Twenty Creek	31	477
Eighteenmile Creek	13	322
Twelvemile Creek	58	492
Sixmile Creek	15	455
Martin Creek	15	530
Coneross Creek	5	292
Seneca Creek	50	382
Shoal Creek	21	531
Eastanollee Creek	25	614
Toccoa Creek	65	532
Tugaloo River	14	383
Chauga River	14	582

E. Yearly Loads:

In the following table, the existing phosphorus loadings are compared to those proposed by Vollenweider (Vollenweider and Dillon, 1974). Essentially, his "dangerous" loading is one at which the receiving water would become eutrophic or remain eutrophic; his "permissible" loading is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic loading would be considered one between "dangerous" and "permissible".

Note that Vollenweider's model may not be applicable to water bodies with short hydraulic retention times.

	Total Phosphorus		Total Nitrogen	
	Total	Accumulated	Total	Accumulated
grams/m^2/yr	0.83	0.68	12.9	loss*

Vollenweider phosphorus loadings ($g/m^2/yr$) based on mean depth and mean hydraulic retention time of Lake Hartwell:

"Dangerous" (eutrophic loading)	0.78
"Permissible" (oligotrophic loading)	0.39

* There was an apparent loss of nitrogen during the sampling year. This may have been due to nitrogen fixation in the lake, solubilization of previously sedimented nitrogen, recharge with nitrogen-rich ground water, unsampled point sources discharging directly to the lake or to unsampled tributaries, or underestimation of the nitrogen load contributed by minor tributaries and immediate drainage. Whatever the cause, a similar nitrogen loss has occurred at Shagawa Lake, Minnesota, which has been studied intensively by EPA's former National Eutrophication and Lake Restoration Branch (Malueg et al., 1975).

V. LITERATURE REVIEWED

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VI. APPENDICES

APPENDIX A

LAKE RANKINGS

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P
4503	FISHING CREEK RESERVOIR	0.143	0.535	483.000	2.811	10.200	0.051
4504	LAKE GREENWOOD	0.061	0.470	463.917	8.150	15.000	0.011
4505	LAKE HARTWELL	0.013	0.130	422.000	6.157	15.000	0.004
4506	LAKE MARION	0.055	0.280	470.176	8.728	14.900	0.010
4507	LAKE MURRAY	0.024	0.260	424.905	6.468	15.000	0.007
4508	LAKE ROBINSON	0.014	0.260	458.778	8.611	14.000	0.005
4510	LAKE WATEREE	0.094	0.450	475.667	8.408	14.100	0.034
4511	LAKE WYLIE	0.045	0.380	462.222	5.422	14.800	0.013
4512	LAKE MOULTRIE	0.026	0.200	455.361	8.800	11.200	0.006
4513	LAKE KEOWEE	0.008	0.170	371.750	2.833	15.000	0.003
4514	LAKE SECESSION	0.057	0.355	462.778	10.722	15.000	0.006
4515	SALUDA LAKE	0.046	0.230	476.833	1.517	10.800	0.006
4516	LAKE WILLIAM C. BOWEN	0.022	0.360	459.889	3.911	15.000	0.007

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P	INDEX NO
4503	FISHING CREEK RESERVOIR	0 (0)	0 (0)	0 (0)	92 (11)	100 (12)	0 (0)	192
4504	LAKE GREENWOOD	17 (2)	8 (1)	33 (4)	42 (5)	21 (0)	25 (3)	146
4505	LAKE HARTWELL	92 (11)	100 (12)	92 (11)	58 (7)	21 (0)	92 (11)	455
4506	LAKE MARION	33 (4)	50 (6)	25 (3)	17 (2)	50 (6)	33 (4)	208
4507	LAKE MURRAY	67 (8)	62 (7)	83 (10)	50 (6)	21 (0)	46 (5)	329
4508	LAKE ROBINSON	83 (10)	62 (7)	67 (8)	25 (3)	75 (9)	83 (10)	395
4510	LAKE WATEREE	8 (1)	17 (2)	17 (2)	33 (4)	67 (8)	8 (1)	150
4511	LAKE WYLIE	50 (6)	25 (3)	50 (6)	67 (8)	58 (7)	17 (2)	267
4512	LAKE MOULTRIE	58 (7)	83 (10)	75 (9)	8 (1)	83 (10)	71 (8)	378
4513	LAKE KEOWEE	100 (12)	92 (11)	100 (12)	83 (10)	21 (0)	100 (12)	496
4514	LAKE SECESSION	25 (3)	42 (5)	42 (5)	0 (0)	21 (0)	58 (7)	188
4515	SALUDA LAKE	42 (5)	75 (9)	8 (1)	100 (12)	92 (11)	71 (8)	388
4516	LAKE WILLIAM C. BOWEN	75 (9)	33 (4)	58 (7)	75 (9)	21 (0)	46 (5)	308

LAKES RANKED BY INDEX NOS.

RANK	LAKE CODE	LAKE NAME	INDEX NO
1	4513	LAKE KEOWEE	496
2	4505	LAKE HARTWELL	455
3	4508	LAKE ROBINSON	395
4	4515	SALUDA LAKE	388
5	4512	LAKE MOULTRIE	378
6	4507	LAKE MURRAY	329
7	4516	LAKE WILLIAM C. BOWEN	308
8	4511	LAKE WYLIE	267
9	4506	LAKE MARION	208
10	4503	FISHING CREEK RESERVOIR	192
11	4514	LAKE SECESSION	188
12	4510	LAKE WATEREE	150
13	4504	LAKE GREENWOOD	146

APPENDIX B

CONVERSION FACTORS

CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x 8.107×10^{-4} = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

APPENDIX C

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR SOUTH CAROLINA 04/27/76

LAKE CODE 4505 HARTWELL RESERVOIR

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 5407.9

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS) JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
4505A1	5407.9	116.08	101.95	128.78	144.32	133.59	123.70	104.50	125.11	105.34	99.98	106.76	145.17	119.75
4505A2	1178.4	36.81	44.74	48.42	40.78	31.15	29.17	27.92	25.20	24.04	24.49	27.16	30.30	32.44
4505B1	76.4	1.13	1.61	1.78	1.64	1.13	0.96	0.85	0.71	0.59	0.65	0.74	1.02	1.07
4505C1	214.2	3.11	4.53	4.98	4.67	3.23	2.72	2.35	1.95	1.73	1.81	2.01	2.89	2.99
4505D1	142.7	2.21	3.20	3.54	3.31	2.29	1.93	1.67	1.39	1.25	1.30	1.44	2.07	2.13
4505E1	354.8	6.29	9.03	9.29	10.45	6.48	5.47	4.76	3.94	3.48	3.57	4.08	5.80	6.03
4505F1	36.0	0.62	0.93	0.99	0.96	0.65	0.54	0.48	0.40	0.34	0.37	0.42	0.59	0.61
4505G1	13.0	0.198	0.283	0.311	0.283	0.227	0.170	0.142	0.113	0.085	0.113	0.113	0.198	0.186
4505H1	190.4	3.34	4.81	5.32	4.98	3.43	2.89	2.49	2.10	1.84	1.93	2.15	3.09	3.19
4505J1	10.3	0.170	0.255	0.255	0.227	0.170	0.142	0.113	0.085	0.085	0.085	0.113	0.142	0.153
4505K1	70.2	1.08	1.42	1.78	1.73	0.96	0.82	0.68	0.62	0.54	0.59	0.65	0.96	0.98
4505L1	63.7	1.13	1.47	1.90	1.81	1.02	0.88	0.71	0.68	0.59	0.62	0.68	1.02	1.04
4505M1	68.4	1.47	1.76	1.93	1.98	1.42	1.08	1.13	0.96	0.76	0.82	0.88	1.25	1.28
4505N1	1367.5	44.17	51.82	54.93	53.52	41.06	34.26	34.26	28.60	27.24	26.28	30.58	37.94	38.64
4505P1	233.6	6.88	8.27	9.00	9.26	6.65	5.10	5.38	4.56	3.62	3.91	4.05	5.78	6.03
4505Q1	37.0	0.59	0.76	0.99	0.96	0.54	0.45	0.40	0.37	0.31	0.34	0.37	0.54	0.55
4505ZZ	1103.3	23.90	33.13	39.08	37.10	23.11	19.57	16.57	14.67	12.77	13.59	14.92	21.75	22.44

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 5407.9
SUM OF SUB-DRAINAGE AREAS = 5160.1

TOTAL FLOW IN = 1440.65
TOTAL FLOW OUT = 1435.27

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
4505A1	2	73	193.970	10	84.951				
	3	73	220.871	19	141.584				
	4	73	240.693	12	317.149				
	5	73	210.111	4	368.119				
	6	73	282.602	1	543.683				
	7	73	118.931	5	269.010				
	8	73	138.469	6	147.248				
	9	73	107.604	4	181.228				
	10	73	90.614	3	161.406				
	11	73	116.099	1	104.772				
	12	73	138.753	4	206.713				
	1	74	260.515	2	317.149	17	481.386		
	2	74	266.178	11	198.218				

TRIBUTARY FLOW INFORMATION FOR SOUTH CAROLINA 04/27/76

LAKE CODE 4505 HARTWELL RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
450542	2	73	18.123	11	18.689				
	3	73	30.865	12	1.501				
	4	73	39.562	10	176.697				
	5	73	32.564	3	1.416				
	6	73	54.935	5	43.042				
	7	73	10.477	2	32.848				
	8	73	16.993	6	1.416	29	86.650		
	9	73	18.264						
	10	73	3.540	3	14.243				
	11	73	6.888	12	12.035				
	12	73	18.406	18	28.317				
	1	74	79.287	7	42.475	21	22.653		
	2	74	82.119	4	84.951				
450581	2	73	3.087	10	2.124				
	3	73	3.596	20	2.832				
	4	73	3.511	12	2.832				
	5	73	3.681	4	2.124				
	6	73	2.265	1	2.690				
	7	73	1.501	5	1.557				
	8	73	1.331	6	1.274				
	9	73	1.671	4	0.850				
	10	73	0.736	3	0.906				
	11	73	0.793	1	0.850				
	12	73	2.095	4	0.850				
	1	74	2.917	2	4.417	17	1.416		
	2	74	3.171	11	2.265				
4505C1	2	73	8.665	11	6.088				
	3	73	10.091	12	11.610				
	4	73	9.826	10	9.769				
	5	73	10.307	3	6.088				
	6	73	6.315	5	6.371				
	7	73	4.219	2	4.389				
	8	73	3.738	6	3.540	29	2.832		
	9	73	4.672						
	10	73	2.095	4	2.350				
	11	73	2.237	12	2.095				
	12	73	5.862	18	2.577				
	1	74	8.212	7	6.315	21	15.857		
	2	74	8.891	4	7.738				
4505D1	2	73	5.777	11	3.964				
	3	73	6.711	12	7.787				
	4	73	6.541	10	6.513				
	5	73	6.853	3	4.106				
	6	73	4.219	5	4.248				
	7	73	2.803	2	2.973				
	8	73	2.492	6	2.265	29	1.841		
	9	73	3.115						
	10	73	1.416	4	1.557				
	11	73	1.472	12	1.416				
	12	73	3.908	18	1.727				
	1	74	5.465	7	4.219	21	10.619		
	2	74	5.918	4	5.154				

132
1

TRIBUTARY FLOW INFORMATION FOR SOUTH CAROLINA 04/27/76

LAKE CODE 4505 HARTWELL RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
4505E1	2	73	14.357	11	9.911				
	3	73	16.707	12	19.397				
	4	73	16.311	10	16.282				
	5	73	17.075	3	10.052				
	6	73	10.477	5	10.477				
	7	73	6.994	2	7.362				
	8	73	6.201	6	6.938	29	4.672		
	9	73	7.759						
	10	73	3.483	4	3.879				
	11	73	3.681	12	3.483				
	12	73	9.713	18	4.276				
	1	74	13.592	7	10.477	21	26.335		
	2	74	14.753	4	12.799				
4505F1	2	73	1.444	11	0.991				
	3	73	1.699	12	1.982				
	4	73	1.642	10	1.699				
	5	73	1.727	3	0.991				
	6	73	1.076	5	0.850				
	7	73	0.708	2	0.708				
	8	73	0.623	6	0.566	29	0.425		
	9	73	0.793						
	10	73	0.368	4	0.396				
	11	73	0.368	12	0.368				
	12	73	0.991	18	0.425				
	1	74	1.388	7	1.076	21	2.690		
	2	74	1.501	4	1.303				
4505G1	2	73	0.538	11	0.349				
	3	73	0.623	12	0.708				
	4	73	0.595	10	0.566				
	5	73	0.623	3	0.368				
	6	73	0.396	5	0.425				
	7	73	0.255	2	0.283				
	8	73	0.227	6	0.198	29	0.170		
	9	73	0.283						
	10	73	0.142	4	0.142				
	11	73	0.142	12	0.142				
	12	73	0.368	18	0.170				
	1	74	0.510	7	0.396	21	0.963		
	2	74	0.538	4	0.481				
4505H1	2	73	7.702	11	5.380				
	3	73	8.948	12	10.336				
	4	73	8.750	10	8.778				
	5	73	9.146	3	5.380				
	6	73	5.687	5	5.663				
	7	73	3.738	2	3.964				
	8	73	3.341	6	3.115	29	2.549		
	9	73	4.163						
	10	73	1.869	4	2.095				
	11	73	1.982	12	1.869				
	12	73	5.219	18	2.294				
	1	74	7.277	7	5.607	21	14.158		
	2	74	7.909	4	6.881				

TRIBUTARY FLOW INFORMATION FOR SOUTH CAROLINA 04/27/76

LAKE CODE 4505 HARTWELL RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
4505J1	2	73	0.425	11	0.283				
	3	73	0.481	12	0.566				
	4	73	0.453	10	0.425				
	5	73	0.510	3	0.283				
	6	73	0.311	5	0.283				
	7	73	0.198	2	0.198				
	8	73	0.170	6	0.170	29	0.142		
	9	73	0.227						
	10	73	0.113	4	0.113				
	11	73	0.113	12	0.113				
	12	73	0.283	18	0.113				
	1	74	0.396	7	0.311	21	0.765		
	2	74	0.425	4	0.368				
4505K1	2	73	2.832	10	1.982				
	3	73	3.313	13	3.823				
	4	73	3.228	13	2.407				
	5	73	3.373	4	1.982				
	6	73	2.067	1	2.549				
	7	73	1.388	5	1.416				
	8	73	1.218	6	1.133				
	9	73	1.529	4	0.850				
	10	73	0.680	3	0.850				
	11	73	0.736	1	0.765				
	12	73	1.926	4	0.765				
	1	74	2.699	2	4.078	17	1.303		
	2	74	2.917	11	2.095				
4505L1	2	73	2.577	10	1.812				
	3	73	3.002	13	3.540				
	4	73	2.917	13	2.265				
	5	73	3.058	4	1.841				
	6	73	1.869	1	2.265				
	7	73	1.246	5	1.274				
	8	73	1.104	6	0.991				
	9	73	1.388	4	0.708				
	10	73	0.623	3	0.765				
	11	73	0.651	1	0.708				
	12	73	1.756	4	0.708				
	1	74	2.435	2	3.681	17	1.189		
	2	74	2.633	11	1.869				
4505M1	2	73	2.775	10	1.926				
	3	73	3.228	13	3.681				
	4	73	3.143	13	2.407				
	5	73	3.285	4	1.982				
	6	73	2.010	1	2.407				
	7	73	1.359	5	1.274				
	8	73	1.189	6	1.133				
	9	73	1.501	4	0.850				
	10	73	0.680	3	0.821				
	11	73	0.708	1	0.736				
	12	73	1.869	4	0.736				
	1	74	2.605	2	3.964	17	1.274		
	2	74	2.832	11	2.010				

TRIBUTARY FLOW INFORMATION FOR SOUTH CAROLINA 04/27/76

LAKE CODE 4505 HARTWELL RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
4505N1	2	73	50.687	10	33.980				
	3	73	66.545	17	41.059				
	4	73	73.907	13	56.634				
	5	73	35.396	4	14.725				
	6	73	72.774	1	33.989				
	7	73	51.253	5	21.238				
	8	73	41.626	6	13.875				
	9	73	22.512	4	31.149				
	10	73	35.113	3	28.317				
	11	73	43.042	1	28.317				
	12	73	64.562	4	82.119				
	1	74	88.065	2	141.584	17	56.634		
	2	74	92.313	11	99.109				
4505P1	2	73	9.458	10	6.654				
	3	73	10.987	19	12.743				
	4	73	10.732	13	8.212				
	5	73	11.242	4	6.654				
	6	73	6.909	1	8.353				
	7	73	4.587	5	4.531				
	8	73	4.078	6	3.823				
	9	73	5.097	4	2.832				
	10	73	2.294	3	2.803				
	11	73	2.435	1	2.549				
	12	73	6.371	4	2.549				
	1	74	8.948	2	13.535	17	4.332		
	2	74	9.713	11	6.909				
4505U1	2	73	1.501	10	0.991				
	3	73	1.727	19	1.982				
	4	73	1.699	13	1.274				
	5	73	1.784	4	0.991				
	6	73	1.104	1	1.274				
	7	73	0.736	5	0.708				
	8	73	0.651	6	0.566				
	9	73	0.793	4	0.425				
	10	73	0.368	3	0.453				
	11	73	0.396	1	0.396				
	12	73	1.019	4	0.396				
	1	74	1.416	2	2.152	17	0.680		
	2	74	1.529	11	1.104				
4505ZZ	2	73	53.802	10	36.812				
	3	73	62.297	12	73.624				
	4	73	56.634	10	62.297				
	5	73	65.129	3	38.228				
	6	73	39.644	5	39.644				
	7	73	26.901	5	26.901				
	8	73	24.069	6	22.379				
	9	73	28.317	4	16.424				
	10	73	13.592	3	16.565				
	11	73	14.158	12	13.592				
	12	73	37.661	4	15.008				
	1	74	52.669	7	40.776	17	25.485		
	2	74	56.634	4	49.838				

APPENDIX D

PHYSICAL and CHEMICAL DATA

STORET RETRIEVAL DATE 76/09/13

450501
34 21 30.0 082 49 45.0 3
LAKE HARTWELL
13147 SOUTH CAROLINA

040391

11EPALES 2111202
0174 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/26	09 20	0000	28.4		396	57	6.60	14	0.050	0.200	0.080	0.002
	09 20	0005	28.4	7.9		55	7.20	14	0.070	0.200K	0.100	0.002K
	09 20	0017	28.4	7.9		53	7.40	16	0.060	0.200K	0.080	0.002K
	09 20	0022	25.3	8.6		49	7.20	16	0.060	0.200K	0.100	0.002K
	09 20	0045	20.8	6.8		40	7.10	14	0.050	0.200K	0.110	0.002K
	09 20	0080	15.8	6.1		39	6.50	16	0.050	0.200K	0.210	0.002K
	09 20	0110	13.9	6.1		39	6.30	17	0.050	0.200K	0.260	0.002K
	09 20	0140	12.9	5.7		39	6.30	17	0.060	0.200K	0.300	0.002K
	09 20	0170	11.8	3.1		45	6.10	16	0.060	0.200K	0.320	0.002K
73/09/15	09 30	0000	28.1		156	32	6.90	10K	0.070	0.600	0.040	0.006
	09 30	0005	28.1	7.2		35	6.60	10	0.030	0.300	0.020	0.004
	09 30	0025	28.1	7.2		34	6.40	10K	0.030	0.200	0.020	0.004
	09 30	0040	26.3	2.2		29	5.90	11	0.030	0.200	0.030	0.004
	09 30	0065	21.9	1.0		26	5.70	10	0.030	0.200K	0.150	0.007
	09 30	0090	19.6	1.6		23	5.60	10K	0.020	0.200K	0.180	0.004
	09 30	0115	17.4	0.8		26	5.60	11	0.030	0.200	0.220	0.003
	09 30	0140	14.9	0.1		28	5.70	13	0.050	0.200K	0.220	0.003
	09 30	0160	13.7	0.1		32	5.80	16	0.180	0.400	0.070	0.002
73/11/13	08 30	0000	18.3		84	29	6.60	10K	0.060	0.500	0.040	0.020
	08 30	0010	18.2	7.4		30	6.50	10K	0.060	0.200	0.040	0.004
	08 30	0025	18.3	7.6		30	6.40	10K	0.060	0.200	0.040	0.003
	08 30	0045	18.3	7.4		30	6.50	10K	0.060	0.300	0.040	0.003
	08 30	0066	18.3	7.6		30	6.50	10K	0.060	0.700	0.030	0.003

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/13

450501
34 21 30.0 082 49 45.0 3
LAKE HARTWELL
13147 SOUTH CAROLINA
040391

11EPALES 2111202
0174 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/26	09 20	0000	0.007	4.7
	09 20	0005	0.006	
	09 20	0017	0.006	
	09 20	0022	0.009	
	09 20	0045	0.009	
	09 20	0080	0.007	
	09 20	0110	0.007	
	09 20	0140	0.007	
	09 20	0170	0.010	
73/09/15	09 30	0000	0.010	4.2
	09 30	0005	0.007	
	09 30	0025	0.007	
	09 30	0040	0.006	
	09 30	0065	0.007	
	09 30	0090	0.005	
	09 30	0115	0.006	
	09 30	0140	0.008	
	09 30	0160	0.008	
73/11/13	08 30	0000	0.044	1.1
	08 30	0010	0.008	
	08 30	0025	0.007	
	08 30	0045	0.007	
	08 30	0066	0.007	

STORET RETRIEVAL DATE 76/04/27

450502
35 23 15.0 082 55 00.0 3
LAKE HARTWELL
45007 SOUTH CAROLINA
040391

11EPALES 2111202
0063 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/26	11 20	0000	29.6		144	50K	7.20	10K	0.060	0.300	0.040	0.002K
	11 20	0005	29.6	8.3		50K	7.10	10K	0.050	0.200	0.040	0.002K
	11 20	0015	28.3	8.8		50K	6.70	10K	0.050	0.500	0.040	0.002
	11 20	0024	24.2	6.5		50K	6.30	10K	0.050	0.300	0.100	0.002
	11 20	0040	21.1	4.2		50K	6.00	10K	0.100	0.300	0.170	0.005
	11 20	0060	18.7	0.9		50K	6.00	11	0.240	0.500	0.260	0.003
73/09/15	10 30	0000	20.4		72	35	6.20	10K	0.040	0.400	0.030	0.004
	10 30	0005	20.2	7.0		38	6.00	10K	0.030	0.300	0.020	0.004
	10 30	0015	20.2	6.8		36	6.00	10	0.040	0.400	0.020	0.003
	10 30	0025	27.8	2.8		37	5.70	10	0.060	0.300	0.040	0.002
	10 30	0045	24.2	3.6		49	5.80	13	0.250	0.600	0.030	0.003
73/11/13	08 00	0000	17.0		72	23	6.50	10	0.080	0.500	0.050	0.017
	08 00	0005	17.0	9.0		27	6.50	10K	0.070	0.200	0.040	0.004
	08 00	0015	17.0	8.4		27	6.50	10K	0.080	0.200	0.070	0.003
	08 00	0030	17.0	8.2		27	6.60	10K	0.070	0.200	0.040	0.003
	08 00	0056	16.5	8.0		25	6.50	10K	0.070	0.200	0.040	0.003

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/26	11 20	0000	0.009	15.0
	11 20	0005	0.009	
	11 20	0015	0.011	
	11 20	0024	0.016	
	11 20	0040	0.015	
	11 20	0060	0.054	
73/09/15	10 30	0000	0.009	6.8
	10 30	0005	0.008	
	10 30	0015	0.009	
	10 30	0025	0.009	
	10 30	0045	0.017	
73/11/13	08 00	0000	0.046	2.6
	08 00	0005	0.011	
	08 00	0015	0.012	
	08 00	0030	0.011	
	08 00	0056	0.025	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/13

450503
34 26 10.0 082 51 20.0 3
LAKE HARTWELL
13147 SOUTH CAROLINA
040391

11EPALES 2111202
0156 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/26	14	15 0000	29.4		140	55	8.00	11	0.070	0.500	0.050	0.002
	14	15 0015	28.8	8.5		57	7.60	10	0.050	0.200K	0.040	0.002
	14	15 0033	22.8	5.5		52	6.80	12	0.070	0.200K	0.120	0.003
	14	15 0050	19.7	5.3		39	6.40	10K	0.070	0.200K	0.130	0.002
	14	15 0090	14.6	4.0		48	6.20	11	0.050	0.200K	0.320	0.002
	14	15 0140	12.8	3.5		49	6.10	13	0.100	0.200K	0.350	0.002
	14	15 0152	12.6	3.1			6.10	13	0.120	0.200	0.340	0.002
73/09/15	11	00 0000	28.1		108	38	6.20	10	0.040	0.400	0.020	0.004
	11	00 0005	28.0	7.2		36	6.20	10	0.040	0.400	0.020	0.005
	11	00 0020	28.0	7.0		34	6.10	10	0.030	0.300	0.020	0.010
	11	00 0035	27.1	4.2		31	5.70	10	0.030	0.200K	0.020	0.004
	11	00 0060	22.1	0.0		34	5.60	12	0.040	0.200K	0.090	0.004
	11	00 0085	20.0	0.1		31	5.60	10	0.050	0.200K	0.130	0.004
	11	00 0115	17.4	0.1		37	5.60	13	0.110	0.200K	0.080	0.004
	11	00 0145	14.6	0.1		43	5.70	16	0.230	0.400	0.020	0.004
73/11/13	09	00 0000	18.2		72	33	6.40	10	0.110	0.500	0.040	0.003
	09	00 0015	18.2	6.2		33	6.30	10	0.130	0.500	0.040	0.002
	09	00 0045	18.2	6.2		34	6.30	10	0.120	0.400	0.040	0.003
	09	00 0075	18.2	6.0		33	6.20	10	0.120	0.500	0.040	0.002
	09	00 0105	18.1	4.2		35	6.20	11	0.170	0.400	0.030	0.002
	09	00 0130	17.4	0.0		63	6.40	16	0.560	0.900	0.040	0.002K
	09	00 0147	15.4	0.0		83	6.40	23	0.960	1.400	0.020	0.002K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/09/13

450503
34 26 10.0 082 51 20.0 3
LAKE HARTWELL
13147 SOUTH CAROLINA
040391

11EPALES 2111202
0156 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/26	14 15	0000	0.013	3.3
	14 15	0015	0.009	
	14 15	0033	0.010	
	14 15	0050	0.015	
	14 15	0090	0.009	
	14 15	0140	0.011	
	14 15	0152	0.015	
73/09/15	11 00	0000	0.007	4.5
	11 00	0005	0.007	
	11 00	0020	0.011	
	11 00	0035	0.007	
	11 00	0060	0.005	
	11 00	0085	0.006	
	11 00	0115	0.007	
	11 00	0145	0.007	
73/11/13	09 00	0000	0.014	0.7
	09 00	0015	0.010	
	09 00	0045	0.008	
	09 00	0075	0.011	
	09 00	0105	0.008	
	09 00	0130	0.019	
	09 00	0147	0.008	

STORET RETRIEVAL DATE 76/04/27

450504
35 30 40.0 082 48 55.0 3
LAKE HARTWELL
45007 SOUTH CAROLINA
040391

11EPALES 2111202
0106 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/26	15 15	0000	29.5		96	50K	8.20	12	0.050	0.300	0.040	0.002
	15 15	0012	28.8	8.5		50K	8.00	10	0.100	0.200	0.050	0.002K
	15 15	0021	25.3	6.1		50K	6.90	13	0.080	0.200	0.210	0.002
	15 15	0050	20.1	4.0		50K	6.40	13	0.060	0.200	0.170	0.002K
	15 15	0080	15.3	3.2		50K	6.10	14	0.040	0.200K	0.390	0.002
	15 15	0100	13.5	2.8		50K	6.10	15	0.040	0.200K	0.440	0.002
73/09/14	15 25	0000	27.0		108	80	6.60	12	0.060	0.500	0.030	0.005
	15 25	0005	27.0	6.6		70	6.30	12	0.040	0.300	0.030	0.004
	15 25	0020	27.0	6.6		75	6.10	11	0.030	0.200	0.200	0.007
	15 25	0035	26.0	3.8		75	6.00	12	0.040	0.200	0.040	0.004
	15 25	0055	22.5	0.0		80	5.90	16	0.090	0.200	0.020	0.006
	15 25	0075	20.0	0.1		90	5.90	15	0.080	0.200	0.100	0.004
	15 25	0095	18.0	0.2		110	6.00	21	0.180	0.400	0.020	0.006
73/11/13	09 30	0000	18.1		84	38	6.50	15	0.110	0.700	0.060	0.003
	09 30	0010	18.1	7.0		37	6.50	15	0.110	0.200	0.060	0.003
	09 30	0025	18.1	5.8		38	6.50	13	0.100	0.200	0.070	0.003
	09 30	0050	18.1	6.8		38	6.50	14	0.100	0.200	0.060	0.003
	09 30	0075	18.1	7.2		38	6.50	14	0.090	0.200	0.090	0.005
	09 30	0096	16.6	7.2		41	6.40					

K VALUE KNOWN TO BE
LESS THAN INDICATED

-42-

STORET RETRIEVAL DATE 76/04/27

450504
35 30 40.0 082 48 55.0 3
LAKE HARTWELL
45007 SOUTH CAROLINA
040391

11EPALES 2111202
0106 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/26	15 15	0000	0.013	5.5
	15 15	0012	0.010	
	15 15	0021	0.014	
	15 15	0050	0.009	
	15 15	0080	0.014	
	15 15	0100	0.016	
73/09/14	15 25	0000	0.011	3.9
	15 25	0005	0.009	
	15 25	0020	0.008	
	15 25	0035	0.009	
	15 25	0055	0.007	
	15 25	0075	0.008	
	15 25	0095	0.008	
73/11/13	09 30	0000	0.010	0.9
	09 30	0010	0.010	
	09 30	0025	0.010	
	09 30	0050	0.012	
	09 30	0075	0.024	

STORET RETRIEVAL DATE 76/04/27

450505
35 33 50.0 082 43 05.0 3
LAKE HARTWELL
45007 SOUTH CAROLINA
040391

11EPALES 2111202
0032 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/26	16 15	0000	30.4		68	63	7.50	16	0.070	0.400	0.050	0.003
	16 15	0005	29.9	8.6		63	7.20	16	0.050	0.300	0.040	0.002
	16 15	0015	26.4	1.4		72	6.40	19	0.060	0.300	0.130	0.002
	16 15	0020	25.0	0.2		80	6.20	22	0.170	0.500	0.120	0.002K
	16 15	0030	22.9	0.2		104	6.10	29	0.380	0.800	0.060	0.002K
73/09/14	15 00	0000	27.5		42	100	7.40	13	0.070	0.400	0.030	0.003
	15 00	0005	27.2	5.8		90	6.90	13	0.060	0.200	0.030	0.004
	15 00	0015	27.0	5.0		90	6.70	13	0.060	0.200K	0.030	0.004
	15 00	0028	26.2	4.0		90	6.40	12	0.100	0.400	0.040	0.008
73/11/13	10 10	0000	15.7		36	36	6.50	15	0.100	0.400	0.070	0.003
	10 10	0005	15.6	8.0		36	6.40	12	0.090	0.400	0.070	0.005
	10 10	0015	15.6	8.2		37	6.50	14	0.080	0.400	0.070	0.003
	10 10	0024	15.4	8.0		37	6.60	16	0.080	0.400	0.070	0.003

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/26	16 15	0000	0.017	9.0
	16 15	0005	0.017	
	16 15	0015	0.022	
	16 15	0020	0.023	
	16 15	0030	0.021	
73/09/14	15 00	0000	0.016	6.4
	15 00	0005	0.016	
	15 00	0015	0.018	
	15 00	0028	0.025	
73/11/13	10 10	0000	0.020	7.2
	10 10	0005	0.018	
	10 10	0015	0.025	
	10 10	0024	0.025	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450506
35 36 00.0 083 09 55.0 3
LAKE HARTWELL
45073 SOUTH CAROLINA
040492

11EPALES 2111202
0035 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/27	09 45	0000	26.7		60	50K	6.50	10	0.080	0.800	0.050	0.003
	09 45	0008	24.6	7.8		50K	6.40	10	0.060	0.200K	0.060	0.006
	09 45	0010	24.1	7.6		50K	6.40	11	0.070	0.200K	0.060	0.003
	09 45	0015	23.9	7.5		50K	6.50	12	0.060	0.200K	0.060	0.002
	09 45	0032	22.7	7.5		50K	6.50	10	0.060	0.200K	0.060	0.002K
73/09/15	15 05	0000	25.6		22	28	6.30	10K	0.040	0.500	0.040	0.005
	15 05	0005	25.5	7.0		26	6.10	10K	0.030	0.300	0.040	0.004
	15 05	0015	25.4	6.6		28	5.90	10K	0.050	0.400	0.050	0.004
	15 05	0030	22.7	6.8		29	5.90	10K	0.090	0.300	0.120	0.008
73/11/13	12 00	0000	13.3		72	21	6.50	10K	0.030	0.400	0.050	0.005
	12 00	0005	13.2	9.8		19	6.50	10K	0.020	0.400	0.050	0.004
	12 00	0016	13.2	9.2		19	6.50	10K	0.030	0.400	0.050	0.003

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/27	09 45	0000	0.013	2.8
	09 45	0008	0.011	
	09 45	0010	0.009	
	09 45	0015	0.011	
	09 45	0032	0.022	
73/09/15	15 05	0000	0.021	2.9
	15 05	0005	0.019	
	15 05	0015	0.020	
	15 05	0030	0.054	
73/11/13	12 00	0000	0.011	3.1
	12 00	0005	0.014	
	12 00	0016	0.010	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450507
35 31 30.0 083 04 55.0 3
LAKE HARTWELL
45119 SOUTH CAROLINA
040391

11EPALES 2111202
0048 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/27	10 45	0000	29.9		85	50K	7.40	10K	0.060	0.200	0.050	0.002
	10 45	0008	29.8	7.8		50K	7.20	10K	0.070	0.200K	0.060	0.003
	10 45	0015	26.1	7.4		50K	6.40	10K	0.070	0.300	0.060	0.003
	10 45	0030	22.6	5.8		50K	6.10	10K	0.070	0.300	0.080	0.002
	10 45	0045	20.6	3.6		50K	6.20	11	0.140	0.200	0.120	0.003
73/09/15	14 40	0000	28.4		67	39	6.60	12	0.050	0.600	0.030	0.009
	14 40	0005	28.0	7.0		37	6.20	11	0.030	0.400	0.020	0.006
	14 40	0015	27.9	6.6		39	6.30	12	0.030	0.300	0.020	0.004
	14 40	0025	26.9	3.4		37	5.80	12	0.060	0.300	0.040	0.005
	14 40	0035	25.9	2.0		39	5.70	12	0.090	0.400	0.060	0.005
	14 40	0048	24.9	1.2		74	5.80	14	0.230	0.700	0.090	0.004
73/11/13	11 45	0000	16.5		72	29	6.50	17	0.050	0.400	0.040	0.003
	11 45	0010	16.1	8.6		28	6.50	18	0.050	0.400	0.040	0.006
	11 45	0020	16.0	8.6		27	6.40	10	0.040	0.500	0.020	0.003
	11 45	0041	16.0	8.8		27	6.40	11	0.040	0.400	0.020	0.003

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/27	10 45	0000	0.007	7.7
	10 45	0008	0.010	
	10 45	0015	0.015	
	10 45	0030	0.012	
	10 45	0045	0.018	
73/09/15	14 40	0000	0.013	5.2
	14 40	0005	0.011	
	14 40	0015	0.011	
	14 40	0025	0.013	
	14 40	0035	0.018	
	14 40	0048	0.056	
73/11/13	11 45	0000	0.038	4.0
	11 45	0010	0.014	
	11 45	0020	0.013	
	11 45	0041	0.017	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450508
34 28 45.0 082 59 30.0 3
LAKE HARTWELL
45007 SOUTH CAROLINA
040392

11EPALES 2111202
0063 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/27	11 45	0000	29.8		125	50K	7.30	10K	0.060	0.500	0.050	0.003
	11 45	0008	29.7	7.8		50K	7.30	10K	0.060	0.300	0.050	0.002
	11 45	0015	28.6	8.2		50K	6.50	10K	0.060	0.300	0.060	0.002
	11 45	0035	21.4	5.8		50K	5.80	16	0.080	0.200K	0.090	0.002
	11 45	0060	19.1	3.6		50K	5.80	18	0.130	0.200	0.140	0.004
73/09/15	19 10	0000	28.6		84	36	6.30	11	0.050	0.700	0.020	0.005
	19 10	0005	28.3	7.8		36	6.20	10	0.030	0.400	0.020	0.007
	19 10	0015	28.2	7.2		36	6.10	10K	0.030	0.300	0.020	0.004
	19 10	0025	28.0	6.6		36	6.08	10K	0.030	0.300	0.020	0.003
	19 10	0040	25.5	1.6		33	5.60	10K	0.070	0.200	0.050	0.004
	19 10	0060	22.3	0.0		66	6.00	15	0.510	0.900	0.020	0.007
73/11/13	11 30	0000	17.3		84	30	6.60	17	0.070	0.500	0.050	0.003
	11 30	0010	17.2	8.0		30	6.50	16	0.070	0.400	0.060	0.003
	11 30	0025	17.2	7.6		29	6.50	16	0.070	0.400	0.070	0.002
	11 30	0041	17.2	8.2		29	6.40	17	0.070	0.300	0.050	0.004

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/27	11 45	0000	0.010	5.3
	11 45	0008	0.007	
	11 45	0015	0.010	
	11 45	0035	0.011	
	11 45	0060	0.026	
73/09/15	19 10	0000	0.011	6.0
	19 10	0005	0.010	
	19 10	0015	0.008	
	19 10	0025	0.009	
	19 10	0040	0.006	
	19 10	0060	0.017	
73/11/13	11 30	0000	0.011	2.6
	11 30	0010	0.009	
	11 30	0025	0.011	
	11 30	0041	0.013	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450509
34 29 00.0 082 54 00.0 3
LAKE HARTWELL
45007 SOUTH CAROLINA
040391

11EPALES 2111202
0120 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/27	14	20 0000	30.2		108	50K	8.30	20	0.110	0.500	0.070	0.008
	14	20 0005	29.8	8.2		50K	7.80	18	0.080	0.300	0.050	0.004
	14	20 0018	27.5	4.4		50K	6.40	22	0.150	0.200	0.130	0.008
	14	20 0030	23.0	5.8		50K	6.10	18	0.070	0.200K	0.060	0.005
	14	20 0070	17.7	3.7		50K	6.10	27	0.110	0.200K	0.160	0.005
	14	20 0090	14.8	3.5		50K	6.00	10	0.080	0.200K	0.210	0.006
	14	20 0115	13.6	3.5		50K	6.00	10	0.070	0.200K	0.230	0.007
73/09/15	13	30 0000	28.7		84	41	6.10	10	0.050	0.700	0.030	0.008
	13	30 0005	28.2	7.2		37	6.00	10K	0.030	0.300	0.020	0.006
	13	30 0015	28.1	6.8		35	6.00	10K	0.040	0.200K	0.020	0.009
	13	30 0025	28.0	6.0		36	5.90	10K	0.040	0.200K	0.030	0.008
	13	30 0045	25.1	3.6		36	5.70	10K	0.110	0.400	0.180	0.006
	13	30 0065	22.4	0.1		41	5.70	10K	0.140	0.200K	0.030	0.003
	13	30 0090	19.6	0.0		63	5.90	17	0.380	0.800	0.030	0.002
73/11/13	11	00 0000	18.3		72	31	6.40	12	0.120	0.800	0.050	0.003
	11	00 0010	18.2	6.7		31	6.40	16	0.120	0.500	0.050	0.003
	11	00 0025	18.2	7.2		30	6.40	16	0.120	0.400	0.050	0.003
	11	00 0050	18.2	1.0		31	6.40	16	0.120	0.400	0.050	0.003
	11	00 0075	18.1	7.0		31	6.40	17	0.120	0.400	0.050	0.004
	11	00 0100	17.7	10.0		31	6.40	16	0.110	0.400	0.050	0.005

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450509
34 29 00.0 082 54 00.0 3
LAKE HARTWELL
45007 SOUTH CAROLINA
040391

11EPALES 2111202
0120 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/27	14 20	0000	0.009	8.2
	14 20	0005	0.008	
	14 20	0018	0.026	
	14 20	0030	0.012	
	14 20	0070	0.025	
	14 20	0090	0.014	
	14 20	0115	0.020	
73/09/15	13 30	0000	0.012	4.9
	13 30	0005	0.009	
	13 30	0015	0.011	
	13 30	0025	0.012	
	13 30	0045	0.093	
	13 30	0065	0.010	
	13 30	0090	0.008	
73/11/13	11 00	0000	0.015	1.2
	11 00	0010	0.011	
	11 00	0025	0.010	
	11 00	0050	0.010	
	11 00	0075	0.009	
	11 00	0100	0.020	

STORET RETRIEVAL DATE 76/04/27

450510
35 38 00.0 082 53 05.0 3
LAKE HARTWELL
45073 SOUTH CAROLINA
040391

11EPALES 21!1202
0063 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/27	15 40	0000	30.5		95	50K	9.30	13	0.080	0.200	0.050	0.005
	15 40	0005	30.3	8.2		50K	7.70	13	0.080	0.200K	0.060	0.004
	15 40	0010	23.9	6.6		50K	6.30	14	0.080	0.200K	0.150	0.004
	15 40	0030	22.3	3.1		50K	6.20	15	0.120	0.200	0.190	0.004
	15 40	0045	21.7	1.1		50K	6.60	14	0.180	0.300	0.180	0.004
	15 40	0060	19.1	0.4		260	6.70	21	0.800	0.800	0.070	0.002
73/09/15	15 45	0000	28.4		75	42	6.30	13	0.050	0.500	0.040	0.005
	15 45	0005	27.5	6.4		42	6.30	14	0.040	0.300	0.030	0.004
	15 45	0015	27.4	5.8		43	6.10	14	0.050	0.400	0.040	0.003
	15 45	0025	27.2	3.8		43	6.00	16	0.080	0.300	0.050	0.004
	15 45	0040	26.4	0.8		57	6.00	20	0.230	0.700	0.050	0.004
73/11/13	12 30	0000	17.0		48	42	6.60	19	0.090	0.400	0.070	0.005
	12 30	0010	16.9	6.6		40	6.60	18	0.080	0.200	0.060	0.004
	12 30	0025	16.6	6.2		41	6.60	19	0.070	0.200	0.060	0.005
	12 30	0042	16.5	6.2		40	6.60	18	0.070	0.200K	0.060	0.006

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/27	15 40	0000	0.012	7.5
	15 40	0005	0.010	
	15 40	0010	0.007	
	15 40	0030	0.018	
	15 40	0045	0.025	
	15 40	0060	0.006	
73/09/15	15 45	0000	0.014	6.1
	15 45	0005	0.014	
	15 45	0015	0.015	
	15 45	0025	0.015	
	15 45	0040	0.036	
73/11/13	12 30	0000	0.030	8.9
	12 30	0010	0.027	
	12 30	0025	0.028	
	12 30	0042	0.027	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450511
35 33 25.0 082 51 55.0 3
LAKE HARTWELL
45007 SOUTH CAROLINA
040391

11EPALES 2111202
0050 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/28	13 05	0000	29.5		94	50K	7.70	14	0.130	0.900	0.050	0.006
	13 05	0005	29.4	8.2		50K	7.60	14	0.070	0.200	0.040	0.002
	13 05	0015	29.1	8.5		50K	7.50	14	0.060	0.200	0.040	0.004
	13 05	0020	24.9	6.5		50K	6.70	14	0.120	0.200K	0.090	0.002
	13 05	0035	21.9	2.8		50K	6.40	16	0.150	0.200	0.160	0.003
	13 05	0045	21.2	1.9		50K	6.40	16	0.150	0.200	0.180	0.003
73/09/14	16 00	0000	27.6		78	80	6.40	15	0.040	0.400	0.030	0.005
	16 00	0005	27.6	6.0		80	6.40	14	0.040	0.300	0.020	0.004
	16 00	0015	27.5	5.8		80	6.30	15	0.040	0.400	0.020	0.004
	16 00	0030	26.2	2.8		100	6.20	15	0.140	0.400	0.030	0.005
	16 00	0045	24.0	0.0		100	6.20	17	0.280	0.600	0.040	0.006
	16 00	0060	22.0	0.0		120	6.20	20	0.500	0.800	0.040	0.004
73/11/13	10 00	0000	17.9		84	42	6.60	15	0.120	0.500	0.060	0.003
	10 00	0010	17.8	4.6		41	6.60	15	0.120	0.300	0.060	0.003
	10 00	0030	17.8	7.2		39	6.50	15	0.120	0.200	0.060	0.002
	10 00	0046	17.6	6.6		39	6.50	15	0.120	0.300	0.060	0.003

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/28	13 05	0000	0.012	10.4
	13 05	0005	0.010	
	13 05	0015	0.013	
	13 05	0020	0.014	
	13 05	0035	0.110	
	13 05	0045	0.013	
73/09/14	16 00	0000	0.012	5.4
	16 00	0005	0.012	
	16 00	0015	0.013	
	16 00	0030	0.017	
	16 00	0045	0.022	
	16 00	0060	0.005	
73/11/13	10 00	0000	0.014	3.2
	10 00	0010	0.012	
	10 00	0030	0.013	
	10 00	0046	0.017	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450512
35 35 50.0 082 56 00.0 3
LAKE HARTWELL
45073 SOUTH CAROLINA
040391

11EPALES 2111202
0037 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/06/28	13 55	0000	29.9		90	50K	8.40	18	0.100	0.500	0.070	0.009
	13 55	0005	29.8	8.2		50K	8.60	15	0.060	0.200K	0.050	0.004
	13 55	0010	29.0	10.4		50K	8.20	13	0.070	0.300	0.060	0.004
	13 55	0015	26.5	6.8		50K	6.80	18	0.070	0.300	0.190	0.004
	13 55	0035	21.5	1.4		50K	6.50	20	0.230	0.400	0.190	0.006
73/09/15	16 05	0000	29.3		71	49	6.20	14	0.030	0.200	0.020	0.004
	16 05	0005	28.1	6.6		47	6.20	15	0.030	0.200K	0.030	0.003
	16 05	0015	27.8	5.4		46	6.00	16	0.030	0.200K	0.030	0.004
	16 05	0025	26.8	1.8		53	5.80	17	0.100	0.300	0.070	0.004
	16 05	0040	23.4	6.4		35	5.70	10K	0.150	0.700	0.270	0.017
73/11/13	13 30	0000	16.7		48	42	6.70	14	0.060	1.000	0.060	0.004
	13 30	0010	16.2	9.0		40	6.70	15	0.040	0.500	0.060	0.005
	13 30	0025	16.1	8.2		42	6.60	15	0.070	0.200K	0.090	0.005
	13 30	0038	14.8	8.2		49	6.70	16	0.070	0.200	0.100	0.006

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/06/28	13 55	0000	0.013	17.5
	13 55	0005	0.015	
	13 55	0010	0.014	
	13 55	0015	0.022	
	13 55	0035	0.021	
73/09/15	16 05	0000	0.010	6.5
	16 05	0005	0.012	
	16 05	0015	0.011	
	16 05	0025	0.020	
	16 05	0040	0.130	
73/11/13	13 30	0000	0.022	8.0
	13 30	0010	0.015	
	13 30	0025	0.041	
	13 30	0038	0.034	

K VALUE KNOWN TO BE
LESS THAN INDICATED

APPENDIX E

TRIBUTARY and WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 76/04/27

4505A1
34 21 00.0 082 49 00.0 4
SAVANNAH RIVER
45 7.5 HARTWELL DAM
O/HARTWELL RES 031391
US RT 29 BRDG BELO DAM
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/10	09 30		0.132	0.230	0.054	0.005K	0.005K
73/03/19	16 25		0.140	1.380	0.063	0.005K	0.007
73/04/12	11 20		0.150	0.130	0.005K	0.005K	0.005K
73/05/04			0.180	2.900	0.105	0.005K	0.010
73/06/01	19 10		0.170	0.840	0.033	0.005K	0.010
73/07/05	10 15		0.220	1.540	0.150	0.005K	0.010
73/08/06	11 45		0.176	0.130	0.019	0.014	0.025
73/09/04	09 35		0.140	2.800	0.110	0.005K	0.010
73/10/03	09 45		0.105	0.160	0.054	0.005K	0.010
73/11/01	10 05		0.028	0.900	0.228	0.005K	0.015
73/12/04	09 50		0.040	0.700	0.100	0.005K	0.005K
74/01/02	09 45		0.072	0.300	0.048	0.008	
74/01/17	09 15		0.140	0.100K	0.020	0.005K	0.005K
74/02/11	10 15		0.200	0.100K	0.010	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505A2
34 44 30.0 082 52 30.0 4
KEOWE RIVER (SENECA RIVER)
45 7.5 CLEMSON
I/HARTWELL RES 031391
RD BRDG .5 MI W OF LAKE ISSAQUEENA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/12	14 45		0.092	0.210	0.042	0.005K	0.005K
73/04/10	09 10		0.100	0.800	0.070	0.005K	0.015
73/05/03	10 00		0.042	0.340	0.015	0.011	0.040
73/06/05	14 45		0.094	1.100	0.058	0.005K	0.010
73/07/02	14 25		0.084	0.930	0.039	0.005K	0.010
73/08/06	14 15		0.010K	0.220	0.009	0.011	0.025
73/08/29	14 00		0.063	0.720	0.039	0.005K	0.015
73/10/03	09 35		0.025	0.250	0.034	0.005K	0.015
73/11/12	14 40		0.072	0.237	0.028	0.012	0.012
73/12/18	13 55		0.088	0.700	0.068	0.005K	0.010
74/01/07	14 00		0.108	0.600	0.084	0.008	0.010
74/01/21	15 10		0.112	0.100K	0.040	0.005K	0.025
74/02/04	14 40		1.180	0.100	0.045	0.005K	0.025

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450581
34 35 30.0 082 39 30.0 4
SIX & TWENTY CREEK
45 15 ANDERSON
T/HARTWELL RES 031392
RD BRDG 4 MI N OF ANDERSON
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/20	09 15		0.399	0.580	0.048	0.010	0.040
73/04/12	10 20		0.330	0.370	0.033	0.008	0.040
73/05/04			0.290	1.150	0.035	0.010	0.035
73/06/01	10 00		0.160	0.460	0.044	0.014	0.045
73/07/05	14 20		0.015	1.470	0.046	0.005K	0.030
73/08/06	15 00		0.012	0.380	0.007	0.010	0.045
73/09/04	14 10		0.040	1.100	0.285	0.005K	0.025
73/10/03	14 30		0.018	0.480	0.017	0.005K	0.040
73/11/01	14 40		0.160	0.425	0.024		0.012
73/12/04	15 00		0.340	0.706	0.056	0.005K	0.015
74/01/02	14 00		0.384	0.700	0.068	0.012	0.012
74/01/17	13 05		0.410	0.200	0.040	0.005K	0.035
74/02/11	15 00		0.450	1.100	0.065	0.010	0.015

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505C1
34 36 00.0 082 46 30.0 4
THREE & TWENTY CREEK
45 7.5 LAFRANCE
T/HARTWELL RES 031391
RD BRDG 1 MI W OF SANDY SPRINGS
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/11	11 47		0.490	1.680	0.130	0.007	0.020
73/03/12	17 00		0.410	0.540	0.063	0.020	0.090
73/04/10	10 45		0.370	0.420	0.045	0.016	0.065
73/05/03	12 15		0.460	0.270	0.042	0.015	0.050
73/06/05	13 00		0.260	1.150	0.350	0.029	0.125
73/07/02	16 00		0.490	0.420	0.110	0.011	0.055
73/08/06	16 00		0.378	0.460	0.063	0.030	0.092
73/08/29	16 25		0.400	1.760	0.780	0.028	0.097
73/10/04	11 25		0.315	0.500	0.066	0.022	0.070
73/11/12	16 20		0.368	0.450	0.056	0.032	0.050
73/12/18	16 00		0.490	0.500	0.076	0.016	0.065
74/01/07	16 15		0.480	0.400	0.064	0.028	0.065
74/01/21	16 15		0.460	0.800	0.096	0.028	0.195
74/02/04	16 50		0.470	0.100	0.040	0.020	0.045

STORET RETRIEVAL DATE 76/04/27

450501
34 36 00.0 082 48 30.0 4
EIGHTEENMILE CREEK
45 7.5 LAFRANCE
T/HARTWELL RES 031391
DIRT RD 1 MI W FROM JCT WITH ST HWY 187
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/11	11 30		0.480	0.230	0.063	0.020	
73/03/12	16 40		0.410	0.690	0.052	0.039	0.230
73/04/10	10 30		0.340	1.100	0.138	0.027	0.137
73/05/03	12 00		0.450	0.765	0.033	0.032	0.115
73/06/05	13 20		0.240	0.960	0.310	0.035	0.155
73/07/02	15 40		0.520	0.985	0.045	0.029	0.165
73/08/06	15 45		0.390	0.480	0.018	0.030	0.155
73/08/29	16 10		0.390	1.540	0.044	0.030	0.150
73/10/04	11 15		0.399	0.560	0.040	0.031	0.145
73/11/12	16 05		0.368	0.300	0.020	0.040	0.110
73/12/18	15 45		0.528	0.450	0.040	0.036	0.125
74/01/07	15 45		0.380	0.500	0.040	0.032	0.110
74/01/21	16 00		0.320	0.600	0.080	0.040	0.305
74/02/04	16 15		0.470	0.200	0.025	0.030	0.140

STORET RETRIEVAL DATE 76/04/27

4505E1
34 46 30.0 082 46 30.0 4
TWELVEMILE CREEK
45 7.5 SIX MILE
T/HARTWELL RES 031391
ST HWY 137 BRDG AT CATEECHEE
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/12	14 10		0.357	0.630	0.042	0.042	0.180
73/04/10	08 40		0.357	0.270	0.021	0.024	0.100
73/05/03	09 25		0.400	0.320	0.016	0.036	0.075
73/06/05	13 30		0.300	0.840	0.210	0.044	0.175
73/07/02	13 50		0.430	0.500	0.154	0.021	0.095
73/08/06	13 50		0.500	0.240	0.016	0.034	0.105
73/08/29	13 30		0.520	2.600	0.330	0.037	0.090
73/10/04	09 00		0.390	0.280	0.026		
73/11/12	14 10		0.352	0.100K	0.012	0.056	0.080
73/12/18	13 30		0.570	0.400	0.040	0.068	0.110
74/01/07	13 30		0.490	0.300	0.028	0.032	0.190
74/01/21	14 40		0.350	0.900	0.128	0.028	0.420
74/02/04	14 00		0.430	0.300	0.020	0.025	0.110

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505F1
34 45 30.0 082 51 30.0 4
SIXMILE CREEK
45 7.5 SIXMILE
T/HARTWELL RES 031391
LIGHT DUTY RD JUST N OF LAKE ISSAQUEENA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/11	09	05	0.378	0.100K	0.031	0.005K	0.005K
73/03/12	14	35	0.290	0.190	0.010	0.014	0.040
73/04/10	09	00	0.320	0.960	0.028	0.005K	0.015
73/05/03	09	45	0.400	1.300	0.068	0.006	0.010
73/06/05	15	00	0.290	0.630	0.115	0.010	0.020
73/07/02	14	10	0.430	0.970	0.100	0.006	0.015
73/08/06	14	10	0.370	0.100K	0.014	0.022	0.030
73/08/29	13	50	0.430	1.200	0.420	0.005K	0.010
73/10/04	09	25	0.320	0.100K	0.019	0.008	0.010
73/11/12	14	28	0.276	0.100K	0.008	0.012	
73/12/18	13	45	0.410	0.400	0.008	0.005K	0.005
74/01/07	13	45	0.380	0.100	0.016	0.012	0.105
74/01/21	15	00	0.312	0.600	0.124	0.016	0.085
74/02/04	14	25	0.368	0.200	0.015	0.005	0.015

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505G1
34 39 30.0 082 54 30.0 4
MARTIN CREEK
4S 7.5 SENECA
T/HARTWELL RES 031391
BANK .3 MI FROM END RD 2 MI SE OF SENECA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/11	10	20	0.790	0.750	0.086	0.005K	0.005K
73/03/12	15	40	0.650	0.190	0.050	0.012	0.035
73/04/10	09	45	0.720	0.100K	0.028	0.005K	0.010
73/05/03	10	30	0.700	0.100K	0.030	0.005K	0.010
73/06/05	11	10	0.590	0.280	0.044	0.005K	0.020
73/07/02	14	55	0.730	1.750	0.028	0.007	0.025
73/08/06	14	40	0.660	0.180	0.046	0.019	0.045
73/08/29	14	20	0.700	0.420	0.160	0.027	0.060
73/10/04	10	05	0.730	0.480	0.154	0.031	0.070
73/11/12	15	00	0.610	0.100K	0.044	0.012	
73/12/18	15	00	0.730	0.300	0.044		0.009
74/01/07	14	30	0.552	0.200	0.020	0.012	0.035
74/01/21	15	25	0.756	0.700	0.076	0.024	0.080
74/02/04	14	55	0.780	1.200	0.270		

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505H1
34 38 00.0 083 58 00.0 4
CONEROSS CREEK
45 7.5 SENECA
T/HARTWELL RES 033092
ST HWY 59 BRDG 3 MI S OF SENECA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/11	11 00		0.350	0.160	0.072	0.016	0.045
73/03/12	16 05		0.300	0.550	0.058	0.019	0.105
73/04/10	10 00		0.273	0.380	0.058	0.020	0.080
73/05/03	10 45		0.357	1.050	0.073	0.024	0.060
73/06/05	13 55		0.230	0.800	0.140	0.027	0.135
73/07/02	15 10		0.360	0.890	0.390	0.018	0.065
73/08/06	15 00		0.300	0.240	0.018	0.026	0.085
73/08/29	15 05		0.300	0.860	0.046	0.030	0.080
73/10/04	10 25		0.390	0.310	0.052	0.036	0.080
73/11/12	15 25		0.336	0.150	0.040	0.036	0.060
73/12/18	15 20		0.390	0.400	0.088	0.040	0.075
74/01/07	14 45		0.336	0.400	0.060	0.024	0.125
74/01/21	15 30		0.336	0.800	0.088	0.032	0.360
74/02/04	15 05		0.336	0.200	0.045	0.020	0.110

STORET RETRIEVAL DATE 76/04/27

4505J1
34 42 30.0 083 54 00.0 4
SENECA CREEK
45 7.5 SENECA
T/HARTWELL RES 033092
BRDG .1 MI OFF HWY 76 2 MI ENE OF SENECA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/11	09 36		0.750	0.690	0.052	0.168	0.195
73/03/12	15 00		0.600	0.260	0.015	0.270	0.315
73/04/10	09 30		0.520	0.130	0.023	0.072	0.090
73/05/03	10 15		0.560	0.140	0.058	0.138	0.160
73/06/05	14 30		0.620	1.180	0.036	0.160	0.195
73/07/02	14 40		0.530	0.520	0.120	0.450	0.490
73/08/06	14 25		0.750	0.210	0.020	0.560	0.670
73/08/29	14 10		0.530	0.110	0.015	0.670	0.735
73/10/04	09 45		0.610	0.100K	0.028	0.336	0.375
73/11/12	14 50		1.200	0.200	0.016	0.870	0.890
73/12/18	14 10		1.800	0.400	0.028	0.820	0.820
74/01/07	14 15		0.920	0.200	0.020	0.410	0.480
74/01/21	15 20		0.720	0.500	0.065	0.192	0.270
74/02/04	14 45		0.950	0.100K	0.020	0.285	0.300

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505K1
34 27 00.0 083 02 30.0 4
SHOAL CREEK
45 7.5 LAVONIA
T/HARTWELL RES 031391
PARKERTOWN MILL BRDG 3 MI E OF LAVONIA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/10	10 15		0.495		0.042	0.005K	0.035
73/03/13	10 00		0.450	1.150	0.048	0.007	0.040
73/04/13	15 20		0.440	0.200	0.023	0.007	0.030
73/05/04	11 50		0.460	1.680	0.088	0.011	0.020
73/06/01	15 10		0.350	1.500	0.240	0.022	0.085
73/07/05	10 50		0.480	1.150	0.048	0.026	0.030
73/08/06	12 15		0.440	0.210	0.019	0.023	0.045
73/09/04	10 10		0.410	0.320	0.048	0.005K	0.025
73/10/03	10 50		0.410	1.200	0.105	0.020	0.040
73/11/01	11 20		0.430	0.600	0.044	0.016	
73/12/04	11 30		0.400	1.100	0.040	0.005K	0.030
74/01/02	10 15		0.504	0.800	0.124	0.020	0.130
74/01/17	10 05		0.540	0.100	0.032	0.008	0.040
74/02/11	11 00		0.552	0.250	0.035	0.015	0.055

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505L1
34 31 30.0 083 11 00.0 4
ESTANOLLEE CREEK
45 7.5 AVALON
T/HARTWELL RES 031391
TOWER RD BRDG 2MI N OF AVALON
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/10	10 45		0.520	0.690	0.126	0.890	1.150
73/03/13	10 30		0.510	0.820	0.069	0.595	0.810
73/04/13	14 35		0.490	2.700	0.140	0.720	0.850
73/05/04	11 26		0.520	0.690	0.046	0.935	1.100
73/06/01	14 40		0.590	0.810	0.160	0.680	0.850
73/07/05	11 25		0.640	1.700	0.231	0.180	0.280
73/08/06	12 35		0.550	0.650	0.028	1.335	1.570
73/09/04	10 20		0.600	1.250	0.056	0.370	0.480
73/10/03	11 05		0.480	0.820	0.045	1.200	1.450
73/11/01	11 45		0.500	0.650	0.092	2.000	2.300
73/12/04	11 50		0.500	0.700	0.084	1.700	1.800
74/01/02	10 45		0.470	1.700	0.152	0.168	0.760
74/01/17	10 40		0.570	0.600	0.052	1.150	1.450
74/02/11	11 35		0.440	0.800	0.050	0.090	0.400

STORET RETRIEVAL DATE 76/04/27

4505M1
34 37 00.0 083 18 00.0 4
TOCCOA CREEK
45 7.5 TOCCOA
T/HARTWELL RES 031391
ST HWYS 1066184 BRDG 3 MI N OT TOCCOA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/10	11 15		0.168	0.880	0.086	0.016	0.065
73/03/13	11 00		0.126	0.500	0.042	0.019	0.055
73/04/13	14 05		0.126	0.300	0.047	0.026	0.060
73/05/04	11 01		0.126	0.240	0.020	0.007	0.030
73/06/01	13 45		0.115	0.955	0.294	0.029	
73/07/05	12 25		0.154	1.000	0.290	0.038	0.065
73/08/06	13 25		0.120	0.360	0.052	0.029	0.071
73/09/04	12 40		0.160	1.980	0.073	0.023	0.040
73/10/03	12 00		0.160	0.390	0.050	0.028	0.090
73/11/01	12 40		0.250	0.800	0.080	0.360	0.410
73/12/04	12 20		0.144	0.500	0.042	0.036	0.110
74/01/02	11 50		0.192	1.800	0.312	0.076	0.375
74/01/17	11 05		0.192	0.200	0.036	0.025	0.040
74/02/11	12 15		0.140	0.800	0.055	0.025	0.105

STORET RETRIEVAL DATE 76/04/27

4505N1
34 39 00.0 083 17 00.0 4
TUGALOO RIVER
45 7.5 TUGALOO LAKE
I/HARTWELL RES 031391
ST HWY 184 BRDG 5 MI N OF TOCCOA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/10	11 25		0.058	0.120	0.020	0.009	0.020
73/03/17	11 10		0.038	0.340	0.008	0.005K	0.015
73/04/13	13 55		0.037	0.100K	0.011	0.005K	0.015
73/06/01	13 30		0.069	0.920	0.200	0.020	
73/07/05	12 35		0.025	0.825	0.079	0.014	0.015
73/08/06	13 35		0.013	0.170	0.029	0.005K	0.015
73/09/04	12 00		0.024	0.780	0.056	0.005K	0.012
73/10/03	12 25		0.028	0.600	0.054	0.005K	0.020
73/11/01	13 05		0.048	0.150	0.044	0.005K	0.010
73/12/04	12 45		0.048	0.300	0.052	0.008	0.025
74/01/02	12 10		0.060	0.200	0.040	0.008	0.015
74/01/17	11 15		0.072	0.200	0.028	0.005K	0.010
74/02/11	13 00		0.068	0.300	0.015	0.005	0.015

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450SP1
34 38 00.0 083 10 30.0 4
CHAUGA RIVER
45 7.5 HOLLY SPRING
T/HARTWELL RES 031391
JEULEIUS BRDG 5 MI WSW OF WESTMINSTER
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/10	11 40		0.046	0.620	0.036	0.005K	0.005K
73/03/19	14 50		0.034	0.120	0.005K	0.005K	0.015
73/04/13	13 25		0.020	0.180	0.023	0.005K	0.010
73/05/04	10 35		0.025	1.380	0.054	0.005K	0.010
73/06/01	13 00		0.046	0.940	0.105	0.007	0.030
73/07/05	13 00		0.014	0.100K	0.014	0.011	0.015
73/08/06	13 50		0.010K	0.100K	0.017	0.013	0.015
73/09/04	12 25		0.015	0.520	0.035	0.005K	0.020
73/10/03	12 45		0.037	3.130	0.154	0.007	0.020
73/11/01	13 35		0.020	0.150	0.018	0.006	0.006
73/12/04	13 10		0.016	0.700	0.020	0.005K	0.015
74/01/02	13 40		0.092	1.100	0.052	0.012	
74/01/17	11 35		0.040	0.100K	0.012	0.005K	0.015
74/02/11	13 15		0.056	0.400	0.025	0.010	0.050

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450501
34 36 00.0 083 06 00.0 4
CHEOSTOEA CREEK
45 7.5 OAKWAY
T/HARTWELL RES 031391
RD BRDG .25 MI W OF OLD METREAT
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/02/10	12 15		0.294	0.100K	0.026	0.008	0.015
73/03/19	14 00		0.270	0.290	0.013	0.005K	0.045
73/04/13	13 10		0.250	0.100K	0.022	0.008	0.030
73/05/04	10 00		0.250	1.000	0.060	0.012	0.032
73/06/01	12 40		0.210	0.660	0.200	0.011	0.040
73/07/05	13 25		0.290	0.630	0.100	0.011	0.045
73/08/06	14 05		0.252	0.110	0.029	0.023	0.045
73/09/04	13 05		0.252	2.600	0.126	0.020	0.045
73/10/03	12 20		0.240	2.100	0.072	0.016	0.040
73/11/01	13 55		0.276	1.000	0.020	0.020	0.020
73/12/04	13 55		0.276	0.300	0.016	0.020	0.045
74/01/02	13 10		0.290	1.500	0.068	0.024	
74/01/17	12 15		0.320	0.100K	0.018	0.012	0.035
74/02/11	13 30		0.252	0.900	0.050	0.015	0.080

K VALUE KNOWN TO BE
LESS THAN INDICATED

-69-

STORET RETRIEVAL DATE 76/04/27

450521 TF450521 P003000
34 21 00.0 082 56 00.0 4
HARTWELL (GEORGIA)
45 7.5 LAVONIA
T/HARTWELL RESERVOIR 031391
COODA BRANCH
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/04/30	08 00								
CP(T)-			0.150	19.000	5.850	18.200	22.000	0.187	0.213
73/04/30	18 00								
73/07/30	07 00								
CP(T)-								0.209	0.194
73/07/31	07 00								
73/09/04	08 00								
CP(T)-				21.100		5.500		0.259	0.260
73/09/04	17 00								
73/10/01	08 00								
CP(T)-			0.220	21.000	5.500	14.200	19.000	0.152	0.201
73/10/01	17 00								
73/10/30	08 00								
CP(T)-			2.900	16.500	7.600	16.300	19.000	0.180	0.201
73/10/30	18 00								
73/12/02	20 30		0.130	17.000	6.200	14.700	17.300	0.166	0.209
74/01/08			0.440	13.000	6.700	18.400	23.000	0.212	0.238
74/01/31			0.240	11.000	4.100	6.500	10.500	0.232	0.209
74/02/28	13 00		0.320	11.000	3.900	6.900	9.100	0.206	0.221
74/04/01	12 30		0.560	21.000	7.350	7.700	13.500	0.196	0.201

STORET RETRIEVAL DATE 76/04/27

450541 AS450541 P002200
34 40 40.0 082 51 00.0 4
CLEMSON
45 7.5 CLEMSON
T/LAKE HARTWELL 031391
SENECA RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/29	11	00							
CP(T)-			0.220	10.500	3.500	4.800	5.700	0.200	0.250
73/06/29	15	00							
73/08/02	10	30	0.045	4.600	1.320	2.900	5.900	0.250	0.300
73/08/31	10	30							
CP(T)-				7.300	3.060	1.440	1.890	0.300	0.350
73/08/31	16	00							
73/10/01	09	00							
CP(T)-			0.150	3.200	0.920	7.700	7.700	0.300	0.300
73/10/01	14	00							
73/11/01	09	00							
CP(T)-			2.000	4.600	0.387	4.700	5.600	0.375	0.350
73/11/01	15	30							
73/12/03	09	00							
CP(T)-			9.100	3.300	0.200	4.600	5.750	0.400	0.350
73/12/03	15	30							
74/01/04	10	30							
CP(T)-			7.300	2.400	0.050	3.000	4.000	0.300	0.375
74/01/04	15	00							
74/02/04	08	00							
CP(T)-			2.160	8.600	2.300	4.700	5.800	0.300	0.375
74/02/04	13	30							
74/03/04	10	00							
CP(T)-			0.040	17.000	8.700	7.600	8.400	0.350	0.350
74/03/04	14	45							
74/04/01	10	00							
CP(T)-			7.400	4.200	0.990	4.900	5.900	0.300	0.350
74/04/01	13	30							
74/05/02	08	30							
CP(T)-			0.160	12.000	3.800	3.300	4.400	0.325	0.350
74/05/02	13	00							

-16-

STORET RETRIEVAL DATE 76/04/27

4505CA PD4505CA P001100
34 36 40.0 082 38 08.0 4
PENDLETON
45 7.5 LA FRANCE
T/LAKE HARTWELL 031392
THREE PLUS TWENTY CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/04	10 30		0.220	11.500	1.909	3.590	4.900		
73/07/14	09 00		0.030	13.000	1.050	4.300	5.730		
73/08/07	09 30		0.220	13.000	1.320	3.600	5.300		
73/12/07	13 30		0.110	12.000	3.300	2.600	4.100		
74/01/24	10 00		0.280	8.400	2.200	1.600	3.700		
74/02/26	10 45		0.320	7.000	3.600	1.900	2.700		

STORET RETRIEVAL DATE 76/04/27

4505DA PD4505DA P002600
34 39 29.0 082 47 30.0 4
PENDLETON
45 7.5 CLEMSON
T/LAKE HARTWELL 031391
SHAUKLIN CREEK/EIGHTEEN MILE CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/04	11 00		0.144	13.800	3.060	3.140	7.900		
73/07/14	09 30		0.010K	18.900	2.100	7.950	9.200		
73/08/07	10 00		0.040	19.000	0.450	8.000	10.500		
73/12/07	13 00		0.060	18.800	6.100	9.100	10.250		
74/01/24	10 30		0.160	10.500	4.400	5.600	6.500		
74/02/26	11 20		0.240	9.600	2.600	5.400	6.100		

K VALUE KNOWN TO BE
LESS THAN INDICATED

-23-

STORET RETRIEVAL DATE 76/04/27

450508 PD450508 P001000
34 51 00.0 082 38 30.0 4
EASLEY
45 15 EASLEY
T/LAKE HARTWELL 031392
RICES CREEK/EIGHTEEN MILE CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/05	11 00		0.070	7.400	0.760	3.400	4.400	0.070	0.070
73/07/09	09 00		0.070	17.000	4.500	8.380	9.000	0.070	0.070
73/08/06	15 00							0.070	0.070
73/09/10			0.023	6.300	0.300	1.900	2.800	0.070	0.070
73/10/01	10 00		0.360	7.000	0.360	1.600	3.000	0.070	0.070
73/11/12	10 00		0.100	11.000	0.640	1.050	3.700	0.070	0.070
73/12/03	09 00		0.070	10.000	1.260	0.054	3.000	0.070	0.070
73/12/31	10 00		0.380	18.500	1.510	0.232	2.200	0.070	0.070
74/02/04	09 00		0.040	7.800	0.210	0.170	1.950	0.070	0.070
74/03/04	10 00		0.120	8.800	1.000	0.142	1.950	0.070	0.070
74/04/09	10 00		0.120	7.050	0.920	0.200	2.150	0.070	0.070
74/05/07	10 00		0.240	6.600	0.960	1.600	2.850	0.070	0.070
74/06/12	14 00		0.080	11.000	0.078	2.200	3.800	0.070	0.070

STORET RETRIEVAL DATE 76/04/27

4505DC PD4505DC P000800
34 50 00.0 082 37 45.0 4
EASLEY
45 15 EASLEY 031392
T/LAKE HARTWELL
GOLDEN CREEK/EIGHTEEN MILE CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/05	10 00		0.105	7.900	1.800	3.500	4.200	0.050	0.050
73/07/09	11 00		0.080	9.800	1.100	2.700	3.700	0.050	0.050
73/08/06	14 00							0.050	0.050
73/09/10	13 00		0.023	12.600	0.220	4.200	6.000	0.050	0.050
73/10/01	11 00		0.160	8.200	1.100	4.400	4.700	0.050	0.050
73/11/12	11 00		0.100	13.000	1.000	4.000	6.000	0.050	0.050
73/12/03	13 30		0.050	9.500	0.700	4.400	6.100	0.050	0.050
73/12/31			0.220	19.500	1.470	3.780	4.900	0.050	0.050
74/02/04	10 00		0.400	7.000	1.480	1.760	3.300	0.050	0.050
74/03/04	09 00		0.120	8.500	1.350	2.200	3.225	0.050	0.050
74/04/09	09 00		0.040	6.300	3.200	2.600	3.150	0.050	0.050
74/05/07	11 00		0.080	13.000	2.500	4.000	6.400	0.050	0.050
74/06/12			0.040	9.600	0.055	4.400	5.900	0.050	0.050

STORET RETRIEVAL DATE 76/04/27

450500 P0450500 P002000
34 49 10.0 082 37 00.0 4
EASLEY
45 15 EASLEY
T/LAKE HARTWELL 031392
EIGHTEEN MILE CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/05	09 00		0.060	17.600	2.600	6.700	8.500	0.100	0.100
73/07/09	10 00		0.060	10.800	0.960	3.880	5.000	0.100	
73/08/06	13 00							0.100	0.100
73/09/10	12 00		0.010K	22.000	3.160	9.460	10.500	0.100	0.100
73/10/01	09 00		0.090	23.100	5.400	8.200	10.000	0.100	0.100
73/11/12	09 00		0.010K	27.000	6.700	9.200	12.000	0.100	0.100
73/12/03	13 00		0.020	26.000	8.500	9.700	14.500	0.100	0.100
73/12/31	09 00		0.080	37.500	5.900	6.000	7.400	0.100	0.100
74/02/04	11 00		0.120	13.000	3.900	4.400	6.350	0.100	0.100
74/03/04	11 00		0.040	16.000	2.600	4.700	7.350	0.100	0.100
74/04/09			0.040	16.000	4.000	5.600	7.800	0.100	0.100
74/05/07			0.114	20.000	5.409	7.300	9.450	0.100	0.100
74/06/12	15 00		0.040	30.000	3.500	7.700	10.500	0.100	0.100

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505EA PD4505EA P001500
34 53 30.0 082 41 50.0 4
PICKENS (TOWN CREEK)
45 15 EASLEY
T/LAKE HARTWELL 031392
UNNAMED CREEK/TWELVE MILE RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/01	11 00		0.079	11.000	0.536	4.080	5.500	0.200	0.200
73/07/05	11 00		0.380	7.900	0.016	4.400	5.100	0.214	0.214
73/08/12	11 00		0.098	8.600	0.240	1.690	5.250	0.143	0.214
73/09/04	09 30		0.100	12.600		5.000	6.150	0.100	0.150
73/10/02	12 30		0.390	7.300	0.800	2.940	6.300	0.100	0.100
73/11/08	10 00		0.390	10.500	1.150	5.300	6.200	0.100	0.150
73/12/03	12 00		0.420	12.000	0.040K	4.700	6.800	0.143	0.214
74/01/08	15 00		0.720	8.000	0.470	3.200	4.400	0.200	0.200
74/02/05	14 30		0.320	9.400	1.280	3.300	4.600	0.150	0.200
74/03/06	11 30		0.320	18.000	1.180	3.650	5.600	0.205	0.185
74/05/06	10 00		0.200	12.000	1.200	3.900	5.800	0.200	0.225
74/06/04	10 30		0.280	6.600	0.230	4.600	5.100	0.171	0.171
74/07/17	13 30		0.160	7.000	0.059	3.750	4.800	0.200	0.214

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505EB P04505E8 P003000*
34 52 30.0 082 41 30.0 4
PICKENS (WOLF CREEK)
45 15 EASLEY
T/LAKE HARTWELL 031392
UNNAMED CREEK/TWELVE MILE RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/01	11 00		0.075	14.000	3.200	6.400	8.400		
73/07/05	10 00		0.180	15.400	0.620	7.450	8.900		
73/08/12	10 00		0.010K	18.000	0.370	2.600	9.400		
73/09/04	10 00		0.020	13.000		6.700	8.400		
73/10/03	11 00		0.110	15.400	6.300	7.300	8.400		0.233
73/11/08	09 30		0.030	21.000	6.400	8.700	9.500	0.200	0.200
73/12/03	10 00		0.050	21.500	7.200	8.900	13.500		
74/01/08	12 00		0.080	9.300	4.100	5.400	6.400	0.200	1.500
74/02/05	11 00		0.040	14.000	4.200	5.700	7.800	0.100	0.175
74/03/06	11 00		0.080	13.000	2.400	5.250	7.100	0.150	0.166
74/05/06	11 00		0.040	24.000	3.300	6.800	10.500	0.150	0.150
74/06/04	11 00		0.040	8.200	0.050K	7.350	7.800	0.214	0.214
74/07/17	13 00		0.080	8.400	0.170	6.200	7.600	0.171	0.186

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505EC P04505EC P001200
34 47 45.0 082 37 57.0 4
LIBERTY #2
45 15 EASLEY
T/LAKE HARTWELL 031392
EIGHTEEN MILE CREEK
11EPALES 2141204
000C FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/12/14	14 15		0.310	21.000	5.600	7.800	11.000		
74/01/11	15 00		0.040	10.800	4.100	3.850	5.830		
74/02/04	16 20		0.160	15.000	3.100	3.700	6.200		
74/02/25	17 30		0.240	12.000	3.600	4.400	6.600		
74/05/06	15 00		0.040	24.000	7.500	7.100	10.000		

STORET RETRIEVAL DATE 76/04/27

4505ED PD4505ED P000800
34 45 33.0 082 41 28.0 4
LIHERTY #3
45 15 EASLEY
T/LAKE HARTWELL 031392
EIGHTEEN MILE CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/12/14	14	35	0.160	17.500	4.200	3.500	5.600		
74/01/11	15	20	0.120	9.500	4.500	2.880	3.800		
74/02/04	16	40	0.120	12.000	3.100	2.890	4.150		
74/02/25	17	30	0.080	14.000	4.100	2.800	4.100		
74/05/06	14	45	0.040	20.000	5.280	4.450	6.700		

STORET RETRIEVAL DATE 76/04/27

4505HA PD4505HA P000154
34 39 50.0 082 58 30.0 4
SENECA (PERKINS #1)
45 7.5 SENECA
T/LAKE HARTWELL 031391
PERKINS CREEK/CONEROSS CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/05	15 00		0.040	11.000	0.540	7.200	8.700		
73/07/24	14 15		0.070	14.700	2.600	8.600	9.800		
73/08/28	14 30			11.000	0.075	7.900	10.500		
73/09/25	10 15		0.240	16.000	1.000	8.600	11.000		
73/10/24	11 00		0.060	18.000	3.700	10.000	12.000		
73/11/27	09 30		0.050	18.000	7.200	11.600	12.500		
74/01/03	09 30		0.280	15.000	4.800	9.500	10.500		
74/01/22	11 00		0.080	13.000	5.200	8.800	10.500		
74/02/18	15 00		0.120	13.000	4.100	7.920	10.500		
74/03/12	10 45		0.160	12.000	1.600	9.600	11.500		
74/04/25	15 00		0.200	36.000	2.000	10.000	15.000		
74/05/20	09 30		0.020	20.000	4.450	10.500	13.500		
74/06/10	13 30		0.120	33.000	6.300	10.300	15.700		

STORET RETRIEVAL DATE 76/04/27

4505MB PD4505MB P007692
34 39 50.0 082 58 30.0 4
SENECA (PERKINS #2)
45 7.5 SENECA
T/LAKE HARTWELL 031391
PERKINS CREEK/CONEROSS CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/05	14 00		0.030	9.700	0.590	4.800	5.900		
73/07/24	14 00		0.110	33.000	2.800	4.800	18.000		
73/08/28	14 00		3.120	15.400	0.820	6.700	8.920		
73/09/25	10 45		0.100	11.000	3.500	6.300	6.800		
73/10/25	13 00		0.120	12.800	2.700	7.500	8.400		
73/11/27	10 30		0.060	25.000	4.300	7.800	10.000		
74/01/03	09 00		0.320	11.500	4.500	5.600	6.700		
74/01/22	10 00		0.040	8.800	4.500	3.820	4.500		
74/02/18	14 30		0.200	8.000	1.700	3.300	4.000		
74/03/12	11 00		0.200	13.000	1.100	4.000	5.100		
74/04/25	14 00		0.[illegible]0	19.000	1.600	4.600	7.200		
74/05/20	10 00		0.040	11.000	1.200	4.700	6.400		
74/06/10	13 00		0.040	12.000	1.100	5.100	6.600		

STORET RETRIEVAL DATE 76/04/27

4505HC PD4505HC P002300
34 40 45.0 082 56 35.0 4
SENECA (MARTIN CREEK)
45 7.5 SENECA
T/LAKE HARTWELL 031391
MARTIN CREEK/CONEROSS CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/05	14 00		0.085	12.000	5.000	6.800	7.200		
73/07/24	13 30		0.070	12.600	4.000	7.600	8.500		
73/08/29	13 45			10.000	1.820	8.200	9.300		
73/09/25	10 00		0.760	41.000	1.500	5.600	6.100		
73/10/25	10 30		0.290	12.500	4.200	7.700	7.900		
73/11/27	11 30		0.030	23.000	9.200	8.800	10.350		
74/01/03	08 30		0.280	21.000	8.300	7.000	8.300		
74/01/22	13 00		0.040	13.500	7.100	5.200	6.300		
74/02/18	14 00		0.840	14.000	5.200	4.800	5.600		
74/03/12	10 30		0.080	13.000	5.700	5.400	6.300		
74/04/25	15 30		0.600	16.000	5.900	5.900	6.900		
74/05/20	10 30		0.880	7.900	2.500	6.700	7.500		
74/06/10	14 00		0.040	13.000	7.350	6.700	7.500		

STORET RETRIEVAL DATE 76/04/27

4505JA AS4505JA P001154
34 41 35.0 082 56 07.0 4
SENECA
45 7.5 SENECA
T/LAKE HARTWELL 031391
SENECA CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/05	14 30		6.100	0.870	0.400	7.700	9.500	0.100	0.100
73/07/24	13 45		0.770	1.100	0.310	7.800	8.400	0.100	0.100
73/08/28	13 30			1.380	0.160	10.700	11.000	0.100	0.100
73/09/25	09 45		13.600	1.380	0.930	12.000	13.000		
73/10/25	10 00		3.800	1.900	0.170	10.500	11.000	0.050	0.050
73/11/27	08 30		6.400	1.600	0.180	10.200	10.500	0.050	0.050
74/01/03	08 00		6.800	3.800	1.120	5.600	6.900	0.050	0.050
74/01/22	09 00		5.400	1.700	0.110	4.700	5.400	0.050	0.050
74/02/18	16 00		8.100	4.600	0.080	5.100	6.600	0.100	0.300
74/03/12	09 00		8.500	2.200	0.160	10.000	11.000	0.150	0.050
74/04/25	14 30		6.100	4.000	0.190	8.000	9.300	1.500	0.500
74/05/20	11 00		11.000	2.000	0.240	9.600	9.800	0.050	0.050
74/06/10	08 00		10.400	1.000	0.300	8.700	8.700	0.050	0.050

STORET RETRIEVAL DATE 76/04/27

4505UA IP4505UA P001800
34 40 07.0 083 05 55.0 4
WESTMINSTER #2
45 7.5 WESTMINSTER
T/NORRIS CREEK / CHOESTO 031391
EA CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/18	14 00		0.336	28.000	16.800	7.200	11.500		
73/07/31	11 00		1.900	2.700	1.540	0.500	0.775		
73/08/30	15 00			7.300	3.520	2.200	3.350		
73/09/26	15 30		2.300	3.900	2.310	1.100	1.600		
73/11/12	09 00		1.150	18.500	7.300	3.000	4.600		
73/12/04	14 45		1.980	2.000	1.200	0.450	1.400		
74/01/08	13 35		1.600	0.500K	0.330	0.210	0.300		0.030
74/02/12	14 00		0.920	7.500	2.800	1.950	3.900		
74/03/05	10 00		1.840	5.200	1.400	0.760	2.300		
74/04/02	10 35		1.200	3.000	1.000	0.560	0.780		
74/05/21	14 30		1.320	7.900	3.500	0.870	1.200		
74/06/06	14 30		1.760	1.000	0.750	0.280	0.700		

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505VA PD4505VA P000200
34 39 16.0 083 04 30.0 4
WESTMINSTER #4
45 7.5 WESTMINSTER
T/MILLERS BRANCH / CONER 031391
OSS CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/18	16 00		0.029	8.900	0.330	7.070	8.200		
73/07/31	13 30		0.070	16.000	1.400	8.700	12.500		
73/08/30	15 30			26.300	0.980	11.400	15.000		
73/09/26	13 00		0.230	13.100	2.100	10.000	12.000		
73/11/12	09 27		0.050	18.000	2.700	10.600	13.000		
73/12/04	14 15		0.110	20.000	3.500	10.600	16.500		
74/01/08	13 55		0.120	7.800	2.400	4.400	6.000		0.040
74/02/12	14 00		0.280	12.000	1.200	4.200	6.100		
74/03/05	10 15		0.120	12.000	0.930	5.600	7.700		
74/04/02	09 35		0.280	16.000	0.310	6.200	9.300		
74/05/21	14 15		0.080	14.000	2.600	9.000	10.500		
74/06/06	13 45		0.080	10.000	1.100	8.200	9.450		

STORET RETRIEVAL DATE 76/04/27

4505WA AP4505WA P000700
34 41 05.0 083 05 05.0 4
COLONELS FORK AERATION POND
45 7.5 WESTMINSTER #1
T/LAKE HARTWELL 031391
COLONELS FORK CREEK / CONEROSS CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/18	15 30		1.640	2.800	0.560	0.730	0.990		
73/07/31	14 00		6.200	10.500	0.490	1.540	2.700		
73/08/30	16 00		5.100	24.100	4.920	1.900	3.400		
73/09/26	14 00		5.400	12.300	0.260	1.800	3.500		
73/11/12	09 42		2.500	15.500	0.160	1.600	3.200		
73/12/04	14 00		3.500	14.000	0.120	1.540	3.800		
74/01/08	14 10		0.920	7.000	0.630	0.980	2.100		0.300
74/02/12	15 00		0.240	8.800	1.800	1.300	2.500		
74/03/05	10 45		1.320	10.000	3.000	2.200	3.450		
74/04/02	09 20		0.440	12.000	2.800	1.850	3.700		
74/05/21	14 00		2.080	13.000	0.160	2.000	3.200		
74/06/06	14 00		1.200	6.000	0.050K	2.800	3.500		

K VALUE KNOWN TO BE
LESS THAN INDICATED

87

STORET RETRIEVAL DATE 76/04/27

4505WB PD4505WB P000200
34 41 05.0 083 05 05.0 4
COLONELS FORK LAGOON
45 7.5 WESTMINSTER #3
T/LAKE HARTWELL 031391
COLONELS FORK CREEK / CONEROSS CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/18			0.028	2.200	0.039	0.720	0.990		
73/07/31	12 15		0.046	2.200	0.130	0.795	1.350		
73/08/30	14 00			2.800		1.320	1.580		
73/09/26	15 00		0.230	3.780	0.051	1.200	1.550		
73/11/12	11 30		0.080	1.900	0.086	1.470	1.750		
73/12/04	13 38		0.160	3.500	0.110	1.680	2.700		
74/01/08	14 25		0.160	2.000	0.100	1.360	1.700		0.020
74/02/12	15 30		0.080	1.300	0.050K	1.150	1.350		
74/03/05	10 30		0.040	3.100	0.050K	1.300	1.850		
74/04/02	10 40		0.120	3.500	0.095	1.250	2.000		
74/05/21	14 45		0.080	6.500	0.910	2.200	2.700		
74/06/06	15 00		0.080	9.200	0.050K	1.950	2.900		

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4505XA EA4505XA P003431
34 45 50.0 083 03 35.0 4
WALHALLA
45 7.5 WALHALLA
T/LAKE HARTWELL 031391
E FORK CONEROSS CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/11	09 30		0.200	10.500	1.580	2.900	3.700		
73/07/10	14 00		0.050	10.000	4.400	1.850	4.700		
73/08/14	16 00		0.110	11.000	1.760	3.620			
73/09/14	15 30		0.420	11.000	2.840	2.760	3.700		
73/10/11	00 00		0.030	10.000	3.400	4.000	5.200		
73/12/11	14 30		0.360	8.450	2.200	3.400	4.900		
74/01/10	10 30		0.480	6.000	2.000	2.160	3.500		
74/04/18	10 00		0.880	8.200	2.700	2.100	3.750		
74/05/15	11 00		0.560	14.000	4.800	2.900	4.800		
74/06/21	14 45		0.240	15.000	4.350	3.250	5.100		
74/07/10	16 00		3.840	6.800	0.125	4.000	5.600		

STORET RETRIEVAL DATE 76/04/27

4505XB IP4505XB P000950
34 45 25.0 083 04 40.0 4
WALHALLA
45 7.5 WALHALLA
T/LAKE HARTWELL 031391
NIGGER FORK CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/11	09 00		5.200	6.300	0.925	3.000	3.800		
73/07/10	14 00		3.400	0.750	0.120	3.700	4.900		
73/08/13	16 00		5.900	0.580	0.357	4.220			
73/09/14	15 00		4.100	6.100	0.273	4.600	5.300		
73/10/11			4.000	4.800	0.170	5.950	6.500		
73/12/11	15 00		6.300	6.900	0.510	5.000	6.900		
74/01/10	11 00		1.680	7.300	3.000	2.500	3.900		
74/04/18	11 00		6.720	6.500	0.220	3.150	5.000		
74/05/15	11 30		6.100	7.600	1.600	4.500	6.100		
74/06/07	11 55		0.360	5.900	1.250	3.700	4.500	0.200	0.225
74/06/21	15 00		4.850	6.000	0.700	4.300	5.400		
74/07/10	16 30		4.700	6.200	0.050	3.450	5.200		

STORET RETRIEVAL DATE 76/04/27

4505YA PD4505YA P001200*
34 47 49.0 082 42 16.0 4
LIBERTY #1
45 15 EASLEY
T/LAKE HARTWELL 031392
GOLDEN CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/12/10	15	20	0.330	21.000	8.400	7.100	9.000		
74/01/11	15	40	0.080	10.500	4.800	3.360	4.900		
74/02/04	16	00	0.080	17.000	5.400	4.000	5.900		
74/02/25	18	30	0.040	15.000	6.000	4.700	6.200		
74/05/06	15	35	0.080	21.000	7.000	5.400	8.000		

16

STORET RETRIEVAL DATE 76/04/27

4505YB PD4505YB P000400
34 47 39.0 082 43 48.0 4
LIBERTY #4
45 15 EASLEY
T/LAKE HARTWELL 031392
GOLDEN CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/12/14	15 00		0.200	9.700	1.800	1.980	3.150		
74/01/11	15 35		0.120	9.500	2.900	2.360	3.700		
74/02/04	17 10		0.200	8.700	1.800	2.300	4.000		
74/02/25	18 10		0.280	15.000	2.500	3.900	5.800		
74/05/06	14 20		0.040	22.000	6.200	3.900	6.600		

STORET RETRIEVAL DATE 76/04/27

4505ZA IP4505ZA P001800
34 43 00.0 082 46 00.0 4
CENTRAL (EIGHTEEN MILE CREEK)
45 7.5 CLEMSON
T/LAKE HARTWELL 031391
UNNAMED CREEK/EIGHTEEN MILE CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/05/30	11 00		2.100	1.260	0.135	2.400	2.700	0.175	0.170
73/06/29	19 30		6.600	1.300	0.110	7.100	7.300	0.100	0.090
73/07/30			15.400	0.330	0.027	5.750	8.040	0.098	0.087
73/08/30	11 00				0.069	7.600	8.400	0.083	0.077
73/09/30	18 00		11.600	0.950	0.180	8.400	8.537	0.115	0.986
73/10/30	08 00		15.200	0.400	0.120	8.600	8.600	0.073	0.073
73/11/30	08 30		13.200	4.900	2.100	8.600	9.700	0.083	0.076
74/01/02	07 45		4.800	3.200	0.085	1.840	2.225	0.130	0.144
74/01/30	08 15		7.700	2.100	0.093	3.680	5.600	0.220	0.165
74/02/28	16 15		13.400	3.600	0.380	5.600	6.600	0.1[illegible]	0.150
74/03/29	09 00		13.400	1.000K	0.320	5.600	6.100	0.075	0.088
74/05/01	09 00		14.400	6.900	3.200	7.800	8.950	0.098	0.114
74/05/31	11 20		10.900	2.000	0.140	5.900	6.100	0.930	0.100

K VALUE KNOWN TO BE
LESS THAN INDICATED

83-

STORET RETRIEVAL DATE 76/04/27

4505ZB IP4505ZB P000350
34 43 40.0 082 47 35.0 4
CENTRAL (TWELVE MILE CREEK)
45 7.5 CLEMSON
T/LAKE HARTWELL 031391
UNNAMED CREEK/TWELVE MILE CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/05/30	11 30		3.290	1.800	0.080	1.680	2.200	0.067	0.081
73/06/30	11 30		19.600	3.150	1.370	9.300	9.700	0.050	0.032
73/07/30	13 30		19.800	3.400	1.150	4.900	10.700	0.027	0.027
73/08/30	11 15		0.980	1.000	0.885	12.750	12.800	0.019	0.021
73/09/30	18 30		0.130	1.300				0.021	0.028
73/10/30	08 30		21.200	1.600	0.830	12.600	12.600	0.017	0.017
73/11/30	09 00		20.400	5.100	2.310	10.500	10.500	0.019	0.018
74/01/02	08 15		4.300	3.100	0.061	1.800	2.700	0.053	0.062
74/01/30	08 00		7.500	6.700	0.040K	8.000	8.580	0.055	0.085
74/02/28	17 15		14.400	2.600	0.640	7.000	7.350	0.035	0.062
74/03/29	09 30		21.000	2.300	1.100	9.450	10.500	0.019	0.022
74/05/01	07 30		20.000	5.300	1.800	9.950	11.000	0.020	0.020
74/05/31	12 00		17.600	3.600	0.500	9.800	10.500	0.018	0.030

K VALUE KNOWN TO BE
LESS THAN INDICATED